Computer Networks MCQs

Multiple Choice Questions and Answers (Quiz & Tests with Answer Keys)

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By Arshad Iqbal

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Answer Keys

Chapter 1

Analog Transmission Multiple Choice Questions

MCQ 1: Multilevel Amplitude Shift Keying (MASK) is not implemented with pure Amplitude Shift Keying (ASK), it is implemented with

A. QAM

B. PSK

C. FSK

D. Binary ASK

MCQ 2: In a constellation diagram, a signal element type is represented as a

A. Dot

B. line

C. x component

D. y component

MCQ 3: The term that refers to the phase continues through the boundary of two signal elements is

A. non coherent BFSK

B. coherent BFSK

C. Binary ASK

D. Multilevel ASK

MCQ 4: The example of an analog to analog conversion is

A. radio

B. Video

C. Television

D. internet

MCQ 5: The total bandwidth required for Amplitude Modulation (AM) is

A. 2B

B. 2(1 + β)B.

C. 2L

D. 2F

MCQ 6: The total bandwidth required for AM can be determined from the bandwidth of the audio signal

A. BAM = 2B

B. BAM = 4B

C. BAM = 6B

D. BAM = 10B

MCQ 7: A constellation diagram can help us to define the signal's

A. Frequency and amplitude

B. amplitude and phase

C. amplitude and frequency

D. Frequency and phase

MCQ 8: In Multilevel Frequency Shift Keying (MFSK), to send 3 bits at a time we can use

A. 2 frequencies

B. 4 frequencies

C. 8 frequencies

D. 10 frequencies

MCQ 9: In the case of Phase Modulation (PM), the value of beta (β) is

A. Lower

B. Greater

C. 0

D. Infinity

MCQ 10: Analog-to-analog conversion can be accomplished in

A. one way

B. two ways

C. three ways

D. four ways

MCQ 11: The projection of the point on the X axis defines the peak amplitude of the

A. above phase

B. below phase

C. in phase

D. out of phase

MCQ 12: Digital information in which the carrier signal is modified by one or more of its characteristics is called

A. Demodulation

B. Modulation

C. Decoding

D. Encoding

MCQ 13: In BPSK, we use a polar Non Return to Zero (NRZ) signal for

A. Decoding

B. Encoding

C. Modulation

D. Demodulation

MCQ 14: The Quadrature Amplitude Modulation (QAM) has the same advantages as

A. ASK and FSK

B. ASK and PSK

C. FSK and PSK

D. None of above

MCQ 15: In Binary Phase Shift Keying (BPSK), there are two values of phase i.e. 0 degree and

A. 180°

B. 90°

C. 360°

D. 720°

MCQ 16: The value of r in analog transmission is

A. log2L

B. 2log L

C. log L/2

D. Log L

MCQ 17: When Amplitude Shift Keying (ASK) is implemented using only two levels then it is called

A. Half Duplex ASK

B. Multilevel ASK

C. Binary ASK

D. Duplex ASK

MCQ 18: Find the bandwidth for the AM if we need to modulate a 5-KHz voice

A. 10 KHz

B. 20 KHz

C. 30 KHz

D. 40 KHz

MCQ 19: The Quadrature means

A. below phase

B. above phase

C. in phase

D. out-of-phase

MCQ 20: The most efficient and commonly used digital to analog conversion mechanism is

A. ASK

B. FSK

C. PSK

D. QAM

MCQ 21: AM stations are allowed carrier frequencies anywhere between

A. 5-10KHz

B. 50-100KHz

C. 250-1000KHz

D. 530- 1700 kHz

MCQ 22: In analog-to-analog conversion, the terms that are usually categorized together is

A. AM and FM

B. AM and PM

C. PM AND FM

D. None of above

Chapter 2

Bandwidth Utilization: Multiplexing and Spreading Multiple Choice Questions

MCQ 1: In synchronous Time-Division Multiplexing (TDM), the data rate of the link is faster

A. 2 times

B. 3 times

C. 4 times

D. n times

MCQ 2: In statistical Time-Division Multiplexing (TDM), a block of data is usually many bytes while the address is just

A. greater bytes than the block of data

B. few bytes

C. zero byte

D. infinite bytes

MCQ 3: The voice channels of the E-4 is

A. 30

B. 120

C. 480

D. 1920

MCQ 4: Telephone companies implement multiplexing

A. TDM

B. FDM

C. WDM

D. DWDM

MCQ 5: The techniques for efficient utilization of bandwidth includes

A. Multiplexing

B. medium linking

C. Sampling

D. Both A &C

MCQ 6: In statistical Time-Division Multiplexing (TDM), only when an input line has a slot's worth of data to send is given a slot in the

A. input frames

B. output frames

C. processing frames

D. statistical frames

MCQ 7: WDM is an analog multiplexing technique to combine

A. magnetic signals

B. electromagnetic signals

C. digital signals

D. optical signals.

MCQ 8: Digital signal service is created by TDM through a hierarchy of digital signals and is implemented by:

A. Radio stations

B. Telephone Companies

C. Television Broadcasting companies

D. Internet

MCQ 9: A pseudorandom code generator is called

A. hopping

B. carrier signals

C. frequency synthesizer

D. pseudorandom noise

MCQ 10: Time-division multiplexing is designed for

A. digital signals

B. analog signals

C. both a and b

D. None

MCQ 11: The technique that uses M different carrier frequencies that are modulated by the source signal is called

A. Multiplexing

B. Spreading

C. FHSS

D. DSSS

MCQ 12: Europeans use a version of T lines that are called

A. E lines

B. N lines

C. D lines

D. U lines

MCQ 13: Multiplexing combines signals from several sources to achieve

A. Data rate management

B. Interleaving

C. TDM efficiency

D. bandwidth efficiency

MCQ 14: Privacy and anti-jamming can be achieved by

A. multiplexing

B. spreading

C. both a and b

D. None of above

MCQ 15: Multilevel multiplexing, multiple-slot allocation and pulse stuffing techniques are used to improve

A. Time division multiplexing

B. Data rate management

C. Interleaving

D. nothing

MCQ 16: The applications of Frequency-Division Multiplexing (FDM) are

A. television broadcasting.

B. AM and FM radio stations

C. cellular telephones

D. All of above

MCQ 17: In Frequency Hopping Spread Spectrum (FHSS), the sender and receiver can have privacy if the hopping period is

A. short

B. long

C. zero

D. infinity

MCQ 18: The synchronous Time-Division Multiplexing (TDM) is not efficient because of

A. higher data rate

B. infinite frames

C. empty slots

D. Both A and C

MCQ 19: TDM is used to combine

A. Analog signals

B. digital signals

C. both a and b

D. None

MCQ 20: In Digital Signal Service, DS-3 is

A. 274. 176-Mbps service

B. 6.312-Mbps service

C. 1.544-Mbps service

D. 44.376-Mbps service

MCQ 21: High data rate capability of fiber optic cable can be achieved by

A. COMA

B. WDM

C. TDM

D. FDM

MCQ 22: If the bandwidth of the link is greater than the bandwidth needed, the bandwidth is

A. Preserved

B. Utilize for other communications

C. Wasted

D. None of above

MCQ 23: The Time-Division multiplexing (TDM) is a digital technique of

A. Encoding

B. Decoding

C. Multiplexing

D. Demultiplexing

MCQ 24: The multiplexing technique that is used when the data rate of an input line is a multiple of others is called

A. multilevel multiplexing

B. multiple-slot allocation

C. pulse stuffing

D. Asynchronous TDM

MCQ 25: A special band is assigned to Amplitude Modulation (AM) radio from

A. 500 to 1700 kHz

B. 530 to 1700 kHz

C. 600 to 1500 kHz

D. 200 to 2000 kHz

MCQ 26: Multilevel multiplexing is a technique used when the data rate of an input line is

A. empty

B. single

C. multiple of others

D. None

MCQ 27: DS-1 to DS-4 is implemented by

A. T-0 to T-4

B. T-0 to T-3

C. T-1 to T-4

D. T-1 to T-3

MCQ 28: TDM is a digital multiplexing technique for combining several low-rate channels into

A. a group of low-rate channels

B. one high-rate one channel

C. two high-rate channel

D. None

MCQ 29: In multiplexing process, the term 'link' refers to the

A. media

B. physical path.

C. power lines

D. information

MCQ 30: Frequency-division multiplexing, wavelength-division multiplexing, are designed for

A. digital signals

B. analog signals

C. both a and b

D. None

MCQ 31: DSSS technique expands the bandwidth of a signal by replacing each data bit with

A. n+1 bits

B. n-1 bits

C. n bits

D. both a and c

MCQ 32: Wavelength division multiplexing is same as

A. FDM

B. TDM

C. DWDM

D. None

MCQ 33: What is the minimum number of bits in a PN sequence if we use FHSS with a channel bandwidth of B =4 KHz and Bss =100 KHz

A. 0 bits

B. 5 bits

C. 10 bits

D. 15 bits

MCQ 34: Each TV channel has its own bandwidth of

A. 6 Hz

B. 6 KHz

C. 6 MHz

D. 60 MHz

MCQ 35: The multiplexing technique, in which each input connection has an allotment in the output even if it is not sending data is

A. Asynchronous TDM

B. Synchronous TDM

C. FDM

D. WDM

MCQ 36: In synchronous TDM, the data rate of the link is n times faster and the unit duration is

A. n times shorter

B. n+1 times shorter

C. n-1 times shorter

D. remains same

MCQ 37: The frequency difference between the Wavelength-Division Multiplexing (WDM) and Frequency-Division Multiplexing (FDM) is

A. very high

B. very low

C. zero

D. infinity

MCQ 38: FDM is an analog multiplexing technique that combines

A. digital signals

B. analog signals

C. both a and b

D. None

MCQ 39: The two techniques to spread the bandwidth are

A. FHSS and TDM

B. DSSS and FHSS

C. FDM and FHSS

D. None of above

MCQ 40: How many types of multiplexing techniques are

A. one

B. two

C. three

D. four

MCQ 41: In multiplexing, channels are separated by unused strips of bandwidth guard bands - to prevent

A. Synchronization

B. Overlapping

C. random motion of electrons

D. Both B and C

Chapter 3

Computer Networking Multiple Choice Questions

MCQ 1: The combination of two or more networks are called

A. Internetwork

B. WAN

C. MAN

D. LAN

MCQ 2: Which topology covers security, robust and eliminating the traffic factor?

A. Mesh

B. Ring

C. Star

D. Bus

MCQ 3: National Internet Service Provider (ISP) networks are connected to one another by private switching stations called

A. Network Access Points

B. Peering Points

C. National ISP

D. Regional ISP

MCQ 4: The multipoint topology is

A. Bus

B. Star

C. Mesh

D. Ring

MCQ 5: A communication path way that transfers data from one point to another is called

A. Link

B. Node

C. Medium

D. Topology

MCQ 6: Common LAN topologies are

A. Bus and ring

B. Mesh and Ring

C. Star

D. both A and C

MCQ 7: The network providing a high speed connectivity is

A. MAN

B. LAN

C. WAN

D. Internetwork

MCQ 8: Synonymous of the rule is

A. Standard

B. Protocol

C. Forum

D. Agency

MCQ 9: The connection in which multi devices share a single link is called

A. Point to point

B. Multipoint

C. Time Shared

D. Spatially Shared

MCQ 10: The elapsed time between an inquiry and a response is called.

A. Transit Time

B. Delay Time

C. Processing Time

D. Response time

MCQ 11: The star topology is used in

A. LAN

B. WAN

C. MAN

D. Internetwork

MCQ 12: Nodes are another name of

A. Devices

B. Links

C. Medium

D. Modes

MCQ 13: The bus, ring and star topologies are mostly used in the

A. LAN

B. MAN

C. WAN

D. Internetwork

MCQ 14: The star topology is less expensive then

A. Mesh

B. Ring

C. Bus

D. Hybrid

MCQ 15: Difficult reconnection and fault isolation are the disadvantages of

A. Star topology

B. Mesh topology

C. Ring topology

D. Bus topology

MCQ 16: The connection of the telephone regional office is the practical example of

A. Ring

B. Hybrid

C. Mesh

D. Bus

MCQ 17: The term that refers to the structure and format of the data is

A. Syntax

B. Semantics

C. Standard

D. Agency

MCQ 18: Cable TV and DSL are examples of

A. Interconnection of network

B. LAN

C. MAN

D. WAN

MCQ 19: In Star topology, the central controller is called

A. Node

B. router

C. Hub

D. Modem

MCQ 20: The largest professional engineering society in the world is

A. American National Standards Institute

B. Electronic Industries Association

C. Institute of Electrical and Electronics Engineers

D. International Organization for Standardization

MCQ 21: The combination of two or more topologies are called

A. Star Topology

B. Bus Topology

C. Ring topology

D. Hybrid

MCQ 22: The newest evolution in LAN technology is

A. Wireless

B. Internet

C. DSL

D. TV Network

MCQ 23: The working document with no official status and a 6-month lifetime is called

A. Internet draft

B. Internet standard

C. Internet Protocol

D. Regulatory Agencies

MCQ 24: Ease of installation is the main advantage of

A. Star

B. Bus

C. Mesh

D. Ring

MCQ 25: OSI stands for

A. Open Systems Interconnection

B. Online Systems Interconnection

C. Open Systems Internet

D. Online systems Interconnection

MCQ 26: Organization that is developing cooperation in the realms of scientific, technological and economic activity is .

A. Institute of Electrical and Electronics Engineers

B. International Organization for Standardization

C. American National Standards Institute

D. Electronic Industries Association

MCQ 27: The network that is usually owned privately and links the devices in the single office is called

A. MAN

B. LAN

C. WAN

D. Internetwork

MCQ 28: The internetworking protocol is known as

A. TCP

B. IP

C. ISP

D. TCPIP

MCQ 29: The parameter that refers to the set of rules that govern data communications are called

A. Forum

B. Standard

C. Agency

D. Protocol

MCQ 30: Defacto means

A. by fact

B. by law

C. by nature

D. by network

MCQ 31: The repeater is used in

A. Mesh Topology

B. Ring Topology

C. Bus Topology

D. Star Topology

MCQ 32: In bus topology, the device linking all the nodes in a network is

A. Router

B. DropLine

C. Backbone

D. hub

MCQ 33: ATM is an example of

A. MAN

B. Point to Point WAN

C. Switched WAN

D. LAN

MCQ 34: ISP stands for

A. Internet Service Provider

B. Internet System Provider

C. International Service Provider

D. International System Program

Chapter 4

Congestion Control and Quality of Service Multiple Choice Questions

MCQ 1: The effective bandwidth is the bandwidth that the network needs to allocate for the

A. Flow of Data

B. Flow of Cost

C. Flow of Traffic

D. Flow of Amount

MCQ 2: Average data rate is equals to

A. amount of data/ amount of Entries sent

B. amount of data/ time

C. time/amount of data

D. total number of bits sent/Packets

MCQ 3: In Congestion Control, DVL stands for

A. Delay Versus Lose

B. Delay Variable Line

C. Delay Versus Load

D. Delay Variable Load

MCQ 4: In Congestion, CBR stands for

A. Control Bit Rate

B. Constant Bit Rate

C. Constant Byte Rate

D. Congestion Byte Rate

MCQ 5: There is no communication between the congested node or nodes and the source in the

A. Implicit Signaling

B. Explicit Signaling

C. Forward Signaling

D. Backward Signaling

MCQ 6: Four different attributes to control traffic have been devised in

A. Data Relay

B. Source Relay

C. Frame Relay

D. IP Relay

MCQ 7: In Congestion Control, a bit can be set in a packet moving in the direction opposite to the congestion in

A. Implicit Signaling

B. Backward Signaling

C. Explicit Signaling

D. Forward Signaling

MCQ 8: The average data rate indicates the average bandwidth needed by the

A. Protocol

B. Channel

C. Stations

D. Traffic

MCQ 9: In Quality Service, Jitter is the variation in delay for packets belonging to the

A. Same Flow

B. Parallel Flow

C. Protocol Flow

D. Both B and C

MCQ 10: A packet which is sent by a node to the source to inform it of congestion is called

A. Congestion Packet

B. Chunk Packet

C. Choke Packet

D. Con-Control Packet

MCQ 11: The token bucket allows bursty traffic to regulated at

A. Maximum rate

B. Minimum rate

C. 0 rate

D. Constant rate

MCQ 12: The Average Data Rate (ADR), is a useful characteristic of

A. Stations

B. Traffic

C. Protocol

D. Average Packet

MCQ 13: Congestion control can be in two examples, one in TCP and the other in

A. Frame Relay

B. Data Relay

C. Source Relay

D. IP Relay

MCQ 14: In Congestion, traffic descriptors are qualitative values that represent a

A. Data Protocol

B. Data Flow

C. Data Congestion

D. Data Traffic

MCQ 15: A flow of data needs resources such as a buffer, bandwidth and

A. CPU time

B. Timer

C. Control flow

D. CPU Control

MCQ 16: In Integrated Services, when a source makes a reservation, it needs to define a

A. Flow Control

B. Timer

C. Error Solution

D. Flow Specification

MCQ 17: In Congestion Control, a bit can be set in a packet moving in the direction of the

A. Implicit Signaling

B. Backward Signaling

C. Forwarded Signaling

D. Explicit Signaling

MCQ 18: The main focus point in Congestion Control and Quality of Services is

A. Data Protocol

B. Data Layer

C. Data Flow

D. Data Traffic

MCQ 19: Integrated Services in which the receivers and not the sender makes the reservation is

A. CLS

B. STCP

C. RSVP

D. IP

MCQ 20: ABR stands for

A. Average Bit Rate

B. Available Bit Rate

C. Available Byte Rate

D. Average Byte Rate

MCQ 21: In Congestion Control, the packet is put at the end of the input queue while waiting to be

A. Checked

B. Entered

C. Read

D. Interpret

MCQ 22: Integrated Services is based on flow based Quality OF Service model designed for

A. CPU

B. Data Node

C. IP

D. Traffic Shaping

MCQ 23: The token bucket can easily be implemented with a counter, initialized by

A. 0

B. 1

C. -1

D. -2

MCQ 24: In Congestion, to define the maximum data rate of the traffic we use

A. Average Data Packet

B. Peak Data Rate

C. Packet Data Rate

D. Average Data Rate

MCQ 25: In the slow-start algorithm, the size of the congestion window increases exponentially until it reaches

A. 0

B. n-1

C. Threshold

D. n+1

MCQ 26: In Congestion, the maximum burst size normally refers to the maximum length of time the traffic is generated at the

A. Average Rate

B. Packet Rate

C. Protocol Rate

D. Peak Rate

MCQ 27: In QoS techniques, packets wait in a buffer (queue) until the node is ready to process them in

A. Out-of-Order Ones

B. Fist-in First out

C. Last-in First-Out

D. First-in-Last-out

MCQ 28: In Forwarded Signaling, a bit can warn the destination about the

A. Signaling

B. Congestion

C. Errors

D. Redundant Signals

MCQ 29: ADR stands for

A. Average Data Rate

B. Average Data Route

C. Average Domain Rate

D. Average Domain Resolution

MCQ 30: A leaky bucket algorithm shapes bursty traffic into fixed-rate traffic by averaging the

A. Data Rate

B. Average Rate

C. Traffic Rate

D. Traffic Shaping

MCQ 31: Two classes of services have been defined for

A. Integrated Services

B. Quality Data Services

C. Technical Services

D. Protocol Services

MCQ 32: In Congestion Control, the warning message goes directly to the

A. Data Station

B. Destination Station

C. Network Station

D. Source Station

MCQ 33: In open-loop congestion control, policies are applied to

A. Prevent Congestion

B. Discard Congestion

C. Maximize Congestion

D. Eliminate Congestion

MCQ 34: A mechanism to control the amount and the rate of the traffic sent to the network is called

A. Traffic Congestion

B. Traffic Flow

C. Traffic Control

D. Traffic Shaping

MCQ 35: In Differentiated Services, each packet contains a field called the

A. DS Field

B. DA Field

C. DC Field

D. DE Field

MCQ 36: Packets from different flows arrive at a switch or router for

A. Analysis

B. Processing

C. Flow of Traffic

D. Flow of Amount

MCQ 37: Scheduling is done on

A. Weighted Fair Queuing

B. Randomly

C. FIFO

D. Both A and C

Chapter 5

Connecting LANs, Backbone Networks and Virtual LANs Multiple Choice Questions

MCQ 1: A point-to-point link in a remote backbone connected by remote bridges acts as

A. Ad hoc network

B. LA Network

C. WA Network

D. MA Network

MCQ 2: Connecting devices are divided into

A. five different categories

B. four different categories

C. three different categories

D. seven different categories

MCQ 3: The bridge must discard any frames too large for its

A. Medium

B. Connection

C. frame format

D. System

MCQ 4: Each LAN type has its own strategy in the sending of

A. Bits

B. Bytes

C. Data

D. Frames

MCQ 5: Each LAN type has its own frame

A. Set

B. Links

C. Data

D. Format

MCQ 6: The device that operates below the physical layer of the OSI model is

A. active hub

B. passive hub

C. bridge

D. repeater

MCQ 7: Wireless LANs implement security measures in the

A. Session Layers

B. Data Link Layers

C. Sub Layers

D. Application Layers

MCQ 8: In filtering when the frame is forwarded, the decision must specify the

A. Device

B. modes

C. Port

D. bridge

MCQ 9: Reconfiguration of the stations in transparent bridges are unnecessary, if the bridge has added or deleted from

A. Packages

B. Frames

C. Segments

D. System

MCQ 10: Stations can be configured through technique

A. manually

B. semiautomatic

C. automatic

D. All of them

MCQ 11: VLANs provides

A. time-efficiency and security

B. reduce network traffic

C. both a and b

D. None of above

MCQ 12: Virtual LANs create

A. broadcast domains

B. limited domains

C. metropolitan area domains

D. All of above

MCQ 13: No protocol at the data link layer allows the fragmentation and reassembly of

A. Packets

B. Frames

C. Stations

D. Nodes

MCQ 14: Active hub is actually a

A. multipart network

B. multipart repeater

C. multipart router

D. multipart hub

MCQ 15: In transparent bridges, redundancy of the bridges can create loops in the system which is very

A. Desirable

B. Undesirable

C. Rare

D. Easy to unloop

MCQ 16: Repeaters only regenerate the strength of the signals, it does not

A. amplify the signals

B. forward frame

C. regenerate the data

D. All of above

MCQ 17: The connecting device which operates at the physical and data link layer is called

A. repeater

B. bridge

C. router

D. gateway

MCQ 18: Bridges are also repeaters and

A. Regenerator

B. Preprocessor

C. Amplifier

D. All of above

MCQ 19: A transparent bridge's duties include

A. filtering frames

B. forwarding

C. blocking

D. All of them

MCQ 20: The repeater is a

A. amplifier

B. generator

C. modifier

D. regenerator

MCQ 21: In transparent bridges, the systems administrator would manually enter each table entry during

A. Data Setup

B. Bridge Setup

C. Frame Setup

D. Packages Setup

MCQ 22: There is no filtering capability in

A. hubs

B. bridges

C. gateways

D. repeaters

MCQ 23: The data of the bridge frames must be fragmented into several frames, then the incoming frame's size is too

A. Short

B. Long

C. Large

D. limited

MCQ 24: A system equipped with transparent bridges must meet

A. Three Criteria

B. Two Criteria

C. One Criteria

D. None of the given

MCQ 25: The bridge must buffer the frame to compensate for the incurred

A. Loss

B. Difference

C. Shortage

D. Damage

MCQ 26: A repeater connects segments of the same

A. Wide area network

B. Wireless Network

C. Local area network

D. Metropolitan Network

MCQ 27: A repeater is a device that operates only in the

A. connector

B. LAN

C. WAN

D. MAN

MCQ 28: A bridge has a table that maps addresses to

A. nodes

B. Signals

C. Media

D. Port

MCQ 29: In the transparent bridge, the stations are completely unaware of the existence of

A. Ports

B. Repeaters

C. Bridge

D. Switch

MCQ 30: A repeater is a device that cannot connect LANs of

A. Different protocols

B. Same Protocols

C. Protocols of Data link layer

D. protocols of presentation layer

MCQ 31: In backbone network, the topology of the backbone is

A. bus

B. star

C. mesh

D. ring

MCQ 32: In source routing, a sending station defines the bridges that the frame must

A. Link

B. Visit

C. Repeat

D. Connect

MCQ 33: Passive Hubs are actually a

A. simple switch

B. gateway

C. connector

D. router

MCQ 34: A repeater receives a signal and before it becomes too weak or corrupted, regenerates the original

A. bit pattern

B. signals

C. segments

D. frames

MCQ 35: Bridge can operate on both layers those are

A. physical and the data link layer

B. physical and the sessional layer

C. application and the data link layer

D. physical and presentation layer

MCQ 36: The connecting device that is used to connect the wires coming from different branches is known as

A. bridges

B. active hubs

C. repeaters

D. passive hubs

MCQ 37: In transparent bridges, when station A sends a frame to station D then there is no entry in

A. Switch initiator

B. Ports

C. Bridge

D. Router's header

Chapter 6

Cryptography Multiple Choice Questions

MCQ 1: A substitution cipher substitutes one symbol with

A. Keys

B. Others

C. Multi Parties

D. Single Party

MCQ 2: An asymmetric-key (or public-key) cipher uses

A. 1 Key

B. 2 Key

C. 3 Key

D. 4 Key

MCQ 3: A straight permutation cipher or a straight P-box has the same number of inputs as

A. cipher

B. Frames

C. Outputs

D. Bits

MCQ 4: We use Cryptography term to transforming messages to make them secure and immune to

A. Change

B. Idle

C. Attacks

D. Defend

MCQ 5: The man-in-the-middle attack can endanger the security of the Diffie-Hellman method if two parties are not

A. Authenticated

B. Joined

C. Submit

D. Separate

MCQ 6: In Asymmetric-Key Cryptography, the two keys, e and d, have a special relationship to

A. Others

B. Data

C. Keys

D. Each other

MCQ 7: The shift cipher is sometimes referred to as the

A. Caesar cipher

B. Shift cipher

C. cipher

D. cipher text

MCQ 8: The substitutional ciphers are

A. Monoalphabatic

B. Sami alphabetic

C. polyalphabetic

D. both a and c

MCQ 9: The heart of Data Encryption Standard (DES), is the

A. Cipher

B. Rounds

C. Encryption

D. DES function

MCQ 10: DES stands for

A. Data Encryption Standard

B. Data Encryption Subscription

C. Data Encryption Solutions

D. Data Encryption Slots

MCQ 11: The cryptography algorithms (ciphers) are divided into

A. two groups

B. four groups

C. one single group

D. None

MCQ 12: A substitution cipher replaces one symbol with

A. same symbol

B. provide two symbols for each

C. another

D. All of them

MCQ 13: The Advanced Encryption Standard (AES), has three different configurations with respect to the number of rounds and

A. Data Size

B. Round Size

C. Key Size

D. Encryption Size

MCQ 14: In Cryptography, the original message, before being transformed, is called

A. Simple Text

B. Plain Text

C. Empty Text

D. Filled Text

MCQ 15: In Cryptography, the input bits are rotated to right or left in

A. Rotation Cipher

B. XOR cipher

C. cipher

D. cipher text

MCQ 16: An encryption algorithm transforms the plaintext into

A. Cipher text

B. Simple Text

C. Plain Text

D. Empty Text

MCQ 17: For RSA to work, the value of P must be less than the value of

A. p

B. q

C. n

D. r

MCQ 18: The International Data Encryption Algorithm (IDEA) was developed by

A. Xuejia Lai and James Massey

B. Xuejia Lai and Bruce Schneier

C. Xuejia Lai and Carlisle Adams

D. Xuejia Lai and Stafford Tavares

MCQ 19: The original message, before being transformed, is

A. Cipher text

B. plaintext

C. decryption

D. None

MCQ 20: Data Encryption Standard (DES), was designed by

A. Intel

B. IBM

C. HP

D. Sony

MCQ 21: In Asymmetric-Key Cryptography, although RSA can be used to encrypt and decrypt actual messages, it is very slow if the message is

A. Short

B. Long

C. Flat

D. Thin

MCQ 22: In symmetric key cryptography, the key used by the sender and the receiver is

A. shared

B. different

C. two keys are used

D. None

MCQ 23: The ciphers of today are called

A. Substitution Cipher

B. Round ciphers

C. Transposition Cipher

D. None

MCQ 24: In Rotation Cipher, keyless rotation the number of rotations is

A. Jammed

B. Idle

C. Rotating

D. Fixed

MCQ 25: In symmetric-key cryptography, the same key is used by

A. One Party

B. Multi Party

C. Third Party

D. Both Party

MCQ 26: In symmetric-key cryptography, the key locks and unlocks the box is

A. same

B. shared

C. private

D. public

MCQ 27: The keys used in cryptography are

A. secret key

B. private key

C. public key

D. All of them

MCQ 28: The ciphers of today are called round ciphers because they involve

A. Single Round

B. Double Rounds

C. Multiple Round

D. Round about

MCQ 29: Symmetric-key cryptography started thousands of years ago when people needed to exchange

A. Files

B. Packets

C. Secrets

D. Transmission

MCQ 30: The relationship between a character in the plaintext to a character is

A. many-to-one relationship

B. one-to-many relationship

C. many-to-many relationship

D. None

MCQ 31: Cryptography, a word with Greek origins, means

A. Corrupting Data

B. Secret Writing

C. Open Writing

D. Closed Writing

MCQ 32: A transposition cipher reorders (permutes) symbols in a

A. block of packets

B. block of slots

C. block of signals

D. block of symbols

MCQ 33: The cipher feedback (CFB) mode was created for those situations in which we need to send or receive r bits of

A. Frames

B. Pixels

C. Data

D. Encryption

MCQ 34: In Cryptography, when text is treated at the bit level, each character is replaced by

A. 4 Bits

B. 6 Bits

C. 8 Bits

D. 10 B its

MCQ 35: The Advanced Encryption Standard (AES) was designed

A. National Institute of Standards and Technology

B. IBM

C. HP

D. Intel

MCQ 36: ECB stands for

A. Electronic Control Book

B. Electronic Code Book

C. Electronic Cipher Book

D. Electronic Cryptography Book

MCQ 37: The cipher which uses the exclusive-or operation as defined in computer science is called

A. Caesar cipher

B. XOR cipher

C. cipher

D. cipher text

MCQ 38: The Cryptography can provide

A. entity authentication

B. nonrepudiation of messages

C. confidentiality

D. All of them

MCQ 39: The shift cipheris sometimes referred to as the

A. Caesar cipher

B. Julia cipher

C. plain cipher

D. All of them

MCQ 40: RSA stands for

A. Rivest, Shamir, Adleman

B. Roger, Shamir, Adrian

C. Robert, Shamir, Anthoney

D. Rivest, Shaw, Adleman

MCQ 41: The Data Encryption Standard (DES) was designed by

A. Microsoft

B. Apple

C. IBM

D. None

Chapter 7

Data and Signals Multiple Choice Questions

MCQ 1: Propagation time is equals to

A. Distance/Propagation speed

B. Propagation speed/Bandwidth

C. Message size/ Bandwidth

D. Bandwidth/Queuing time

MCQ 2: Period is the inverse of

A. Frequency

B. Phase

C. Amplitude

D. Signals

MCQ 3: The black and white TV is an example of

A. non-periodic composite signal

B. periodic composite signal

C. periodic simple signal

D. None of above

MCQ 4: The level of the signal is inversely proportional to the

A. Reliability of a system

B. Efficiency of a system

C. Accuracy of a system

D. Bandwidth of a system

MCQ 5: The Nyquist formula gives us any signal level while Shannon capacity gives us the

A. Lower Limit

B. Upper Limit

C. Specific signal level

D. Both B&C

MCQ 6: Increasing the levels of a signal may reduce the

A. Reliability of the system

B. Efficiency of the system

C. speed of system

D. Frequency of system

MCQ 7: If signal does not change at all, its frequency is

A. Zero

B. Maximum

C. Infinite

D. None of Above

MCQ 8: A period of 100 ms in microseconds would be equals to

A. 10^3us

B. 10^5us

C. 10^7us

D. 10^9us

MCQ 9: Analog data refers to information that is

A. Discrete state

B. Continuous state

C. Randomly arranged

D. None of Above

MCQ 10: We send a voice signal from a microphone to a recorder, the transmission is

A. Base band transmission

B. Broad band transmission

C. both a and b

D. None of Above

MCQ 11: The unit that is used to express the state of a signal is

A. Kilograms

B. Seconds

C. Decibel

D. Hertz

MCQ 12: The data rate depends upon

A. Bandwidth

B. Level of signals

C. Level of noise

D. All of above

MCQ 13: Bit rate is measured in

A. Bits per Hertz

B. Bits Per Second

C. Nano seconds

D. Pixels per second

MCQ 14: Periodic analog signals can be classified as

A. Simple analog signal

B. Composite analog signal

C. Multiple Sine waves

D. All of the of Above

MCQ 15: Digital data refers to the information that is

A. Continuous

B. Discrete

C. Bits

D. Bytes

MCQ 16: Conversion of digital signal to analog signal is

A. Modulation

B. Demodulation

C. Encapsulation

D. Bypass

MCQ 17: A sine wave is defined by

A. amplitude

B. frequency

C. Phase

D. All of above

MCQ 18: A digital signal is a composite analog signal with

A. finite bandwidth

B. Infinite bandwidth

C. zero bandwidth

D. None of above

MCQ 19: Digital signals are represented in

A. Sine Waves

B. Levels

C. Stages

D. None of above

MCQ 20: In data communications, the non-periodic signals

A. Sine wave

B. Digital Signals

C. Analog Signals

D. None of above

MCQ 21: The term that refers to loss of strength of a signal is called

A. attenuation

B. distortion

C. Noise

D. Impairments

MCQ 22: The value of the decibel is positive, if signal is

A. Attenuated

B. Distorted

C. Noisy

D. Amplified

MCQ 23: The completion of one full pattern is called a

A. period

B. Cycle

C. Frame

D. Segment

MCQ 24: The term that describes the position of the waveform relative to time 0 is

A. Wavelength

B. Period

C. Frequency

D. Phase

MCQ 25: Bit Rate is the number of bits sent in

A. 1sec

B. 2sec

C. 10sec

D. 100sec

MCQ 26: In baseband transmission, the required bit rate is proportional to the

A. Wavelength

B. frequency

C. Period

D. Bandwidth

MCQ 27: Change over a long span of time means

A. High Frequency

B. Low Frequency

C. High Phase

D. Low phase

MCQ 28: The term that refers to infinite no of values in the range is

A. Peak

B. Analog Signal

C. Digital Signal

D. None of above

MCQ 29: The propagation speed of electromagnetic signals depends on the

A. medium

B. Period

C. Phase

D. delay

MCQ 30: The transmission impairment that refers to a signal with high energy in a very short time is

A. Thermal Noise

B. Induced Noise

C. Cross talk

D. Impulse Noise

MCQ 31: Bit length can be defined in terms of

A. high and low frequency

B. Propagation Speed

C. Bit duration

D. both B&C

MCQ 32: If a noiseless channel with a bandwidth of 3000 Hz transmitting a signal with two signal levels the maximum Bit rate would be

A. 12000 bps

B. 6000 bps

C. 1800bps

D. zero

MCQ 33: Sine wave can be represented by three parameters

A. peak amplitude, frequency and bandwidth

B. Frequency, phase and bandwidth

C. Peak amplitude, frequency and Phase

D. Peak amplitude, bandwidth, Period

MCQ 34: The range of frequencies a channel can pass is called bandwidth in

A. Bits per second

B. Hertz

C. Kilogram

D. Nanosecond

MCQ 35: When there is heavy traffic on the network, the queuing time is

A.

B. Remains same

C. increases

D. decreases

MCQ 36: The time required for a bit to travel from source to destination is

A. Latency

B. Propagation Time

C. Delay

D. Transmission time

MCQ 37: In data communications, we use periodic analog signals and

A. Periodic digital signals

B. Non-periodic analog signals

C. Non-periodic digital signals

D. both a and c

MCQ 38: The range of frequencies contained in a composite signal is its

A. Wavelength

B. Bandwidth

C. amplitude

D. Composite

MCQ 39: In real life, we cannot have a

A. Noisy Channel

B. Noiseless channel

C. Bandwidth of channel

D. Frequency of channel

MCQ 40: A transmission media can have signal impairment because of

A. Noise

B. Attenuation

C. distortion

D. All of above

MCQ 41: The bandwidth of a composite signal is the difference between the highest and

A. zero frequency

B. lowest frequencies

C. two Parallel frequencies

D. None of Above

MCQ 42: The relationship between amplitude and frequency can be represented by

A. frequency-domain plot.

B. Time-domain plot.

C. Phase Domain Plot

D. Amplitude domain Plot

MCQ 43: Frequency is expressed in

A. Second

B. Nanosecond

C. Hertz

D. Megahertz

MCQ 44: Given the frequency 24Hz the corresponding period would be

A. 87.9ms

B. 41.7ms

C. 90ms

D. 12ms

MCQ 45: The power in our house can be represented by

A. sine wave with a peak amplitude

B. sine wave with amplitude

C. sine wave with phase

D. sine wave with frequency

MCQ 46: In induced noise, the impairment is created by sources like

A. Motor and appliances

B. Power lines

C. the sending and receiving antenna

D. Motion of electrons in wire

MCQ 47: Data to be transmitted must be transformed into

A. Electronic signal

B. Magnetic pulses

C. Radiations

D. Electromagnetic signals

MCQ 48: SNR stands for

A. Shannon Noise ratio

B. Shannon Noise Relation

C. Signal Noise ratio

D. Signal Noise Relation

MCQ 49: SNR (signal to noise ratio) is equals to

A. Avg signal power/Avg noise power

B. Avg signal power/Avg distortion

C. Avg noise power/Attenuation

D. Avg Attenuation/Avg distortion

MCQ 50: One Picoseconds (PS) is equivalent to

A. 10^{-3} s

B. 10^{-6} s

C. 10^{-9} s

D. 10^{-12} s

MCQ 51: We cannot send the digital signal directly to the channel, when the channel is

A. bandpass

B. Bypass

C. baseband

D. Low pass

MCQ 52: The difference in the delay of the signal may create a difference in

A. Phase

B. Frequency

C. Period

D. Decibel

MCQ 53: Signal to Noise Ratio is the ratio of the two

A. Signals

B. Powers

C. Noise

D. Frequencies

MCQ 54: According to Fourier analysis, any composite signal is a combination of sine waves with

A. diff frequencies amplitude, and phase

B. different frequencies

C. same frequencies

D. same frequencies with amplitude and phase

MCQ 55: How many factors data rate limit depends on

A. One

B. two

C. four

D. three

Chapter 8

Data Communications Multiple Choice Questions

MCQ 1: Information can be represented as a sequence of

A. byte patterns

B. characters

C. bit patterns

D. images

MCQ 2: The parameter that refers to the recording and broadcasting of the picture is

A. Text

B. Audio

C. Image

D. Video

MCQ 3: Both station can transmit and receive data simultaneously in

A. simplex mode

B. Half duplex mode

C. Full duplex mode

D. None of Above

MCQ 4: In representation of text symbols, each set of the bit pattern is called

A. Code

B. Unicode

C. Coding

D. sequence

MCQ 5: Data communications are the transfer of data through some

A. transmission medium

B. linear medium

C. Network LAN

D. Protocols

MCQ 6: Keyboard and traditional monitors are examples of

A. Simplex devices

B. Duplex devices

C. Half Duplex devices

D. Full Duplex devices

MCQ 7: The term that is used for physical path by which a message travels from sender to receiver is

A. Jitter

B. Protocol

C. Transmission Medium

D. Information

MCQ 8: In star topology if the central hub goes down, it effects

A. One node

B. No node

C. whole system

D. Don't know

MCQ 9: Protocols are, set of rules to govern

A. Communication

B. Standards

C. Metropolitan communication

D. None of Above

MCQ 10: The parameter that refers to uneven delay of data packets in the delivery is

A. Jitter

B. Timelessness

C. Accuracy

D. Transmission medium

MCQ 11: The mode in which each station can send and receive data but not at the same time is called

A. Half Duplex

B. Simplex

C. Full Duplex

D. Duplex

MCQ 12: Maximum number of characters or symbols that can be represented by Unicode

A. 2^4

B. 2^6

C. 2^{16}

D. 2^{32}

MCQ 13: The word Tele means

A. Far

B. Near

C. Apart

D. Beside

MCQ 14: In mesh topology, the devices are connected via

A. Multipoint link

B. Point to point link

C. No Link

D. None of above

MCQ 15: Performance, reliability and security are criteria of

A. Efficient network

B. intranet

C. Ethernet

D. None of Above

MCQ 16: The effectiveness of a data communications system depends on four fundamental characteristics

A. delivery, accuracy

B. timeliness and jitter

C. jitter and delivery

D. both a and b

MCQ 17: Hybrid network includes combination of

A. Nodes

B. Devices

C. topologies

D. None of above

MCQ 18: Delivering data to the correct destination is

A. Delivery

B. Accuracy

C. Timelessness

D. Jitter

MCQ 19: Telephone is an example of

A. Full Duplex

B. Simplex

C. Half Duplex

D. None of above

MCQ 20: An internet is a

A. Collection of WANS

B. Network of networks

C. collection of LANS

D. Collection of identical LANS and WANS

MCQ 21: When the system delivers data accurately then it is called

A. Accuracy

B. Delivery

C. Jitter

D. Timelessness

MCQ 22: The mode that is like a two way street with traffic flowing in both direction simultaneously is

A. Simplex

B. Full Duplex

C. Half Duplex

D. None of above

MCQ 23: The agreement between the communicating devices are called

A. Data

B. Message

C. Protocol

D. Transmission Medium

MCQ 24: The five components that make up a data communications system are the message, sender, receiver, medium and

A. protocol

B. Code

C. connecting device

D. both a and b

MCQ 25: Two computers connected by an Ethernet hub are of

A. LAN topology

B. MAN topology

C. WAN topology

D. None of above

MCQ 26: Tele is a word in

A. French

B. Egyptian

C. German

D. Greek

Chapter 9

Data Link Control Multiple Choice Questions

MCQ 1: Piggybacking protocol is a technique used for

A. ACKs

B. NAKs

C. both a and b

D. None

MCQ 2: The frame type that refers to High-level Data Link Control error detection field is

A. Frame Check Sequence field

B. Control field

C. flag field

D. information field

MCQ 3: In Asynchronous Balanced Mode (ABM), the link is

A. unidirectional

B. bidirectional

C. point to point

D. multipoint

MCQ 4: In byte stuffing, a special byte is added to the data section of the frame when there is a character with the same pattern as the

A. flag

B. error

C. sender

D. destination

MCQ 5: In the transition phase, the term that refers to start of the communication is

A. authenticate

B. establish

C. network

D. terminate

MCQ 6: Internet users use the

A. High-level Data Link Control

B. Password Authentication Protocol

C. Multipoint Protocol

D. Point to Point Protocol

MCQ 7: The term that refers to a set of procedures used to restrict the amount of data that the sender can send before waiting for acknowledgment is

A. error control

B. flow control

C. delay

D. byte stuffing

MCQ 8: The sequence numbers of the Stop-and-Wait Automatic Repeat Request are based on

A. simple arithmetic

B. modulo-2 arithmetic

C. logical arithmetic

D. modular multiplicative inverse

MCQ 9: In the Password Authentication Protocol (PAP), the value of the protocol field is

A. OxD023

B. OxC023

C. OxA023

D. OxB023

MCQ 10: The Link Control Protocol packet that refers to accept the shut down request is used the code of

A. 0x0A

B. 0x0B

C. 0x06

D. 0x07

MCQ 11: In the Internet Protocol Control Protocol (IPCP), the code value of Ox04 is used to represent the packet of

A. Configure-request

B. Configure-reject

C. Terminate-request

D. Code-reject

MCQ 12: PPP is a

A. byte-oriented protocol

B. connection-oriented protocol

C. connectionless protocol

D. None

MCQ 13: Stop-and-Wait Automatic Repeat Request is a special case of

A. Simplest Protocol

B. Go Back-N Automatic Repeat Request

C. Selective Repeat Automatic Repeat Request

D. Stop and Wait

MCQ 14: In the control field, the first bit defines the

A. sequence number

B. acknowledgement number

C. type

D. information

MCQ 15: Error control is the combination of

A. error detection and error correction

B. flow and error control

C. bit stuffing and unstuffing

D. byte stuffing and unstuffing

MCQ 16: The range of the possible sequence numbers of Go-Back-N Protocol which is the concern of the receiver is called the

A. sender sliding window

B. pipelining at the sender

C. pipelining at the receiver

D. receiver sliding window

MCQ 17: The Internet Protocol Control Protocol (IPCP) has a protocol field value of

A. 0x8021

B. 0x8023

C. 0x8025

D. 0x8027

MCQ 18: The protocol that deals with the Xerox protocol data packets are called

A. Xerox Control Protocol

B. Internet Protocol Control Protocol

C. OSI Network Layer Control Protocol

D. AppleTalk

MCQ 19: The term that is used to define the end of the frame and the beginning of the next frame is called

A. byte stuffing

B. byte unstuffing

C. fixed size framing

D. variable size framing

MCQ 20: Each frame in HDLC may contain up to

A. three fields

B. four fields

C. five fields

D. six fields

MCQ 21: In multiple Point to Point Protocol, the value of the protocol field is

A. Ox003b

B. Ox003c

C. Ox003d

D. Ox003f

MCQ 22: In Normal Response Mode (NRM), the station configuration is

A. balanced

B. unbalanced

C. zero

D. undefined

MCQ 23: The data section of the frame has an extra byte is called the

A. bit stuffing

B. byte stuffing

C. escape character

D. number stuffing

MCQ 24: In High-level Data Link Control (HDLC), the frame that is used only to transport control information is called

A. I- frame

B. S-frame

C. V-frame

D. Piggybacking

MCQ 25: Framing that is done on data link layer are of

A. 1 type

B. 2 types

C. 3 types

D. 4 types

MCQ 26: ATM wide-area network is an example of

A. fixed size framing

B. variable size framing

C. no framing

D. zero size framing

MCQ 27: The protocol that is designed for use over dial-up links where verification of user is necessary is

A. Authentication Protocol

B. Network Control Protocol

C. Link Control Protocol

D. High-level Data Link Protocol

MCQ 28: Error control in the data link layer is based on

A. automatic repeat request

B. manually repeat request

C. situation based

D. both a and b

MCQ 29: The Stop and Wait Protocol uses the link of

A. modulation

B. full duplex

C. half duplex

D. None of above

MCQ 30: Any time an error is detected then the specified frames are

A. stuffed

B. detected

C. corrected

D. retransmitted

MCQ 31: In a real-life network, the data link protocols are implemented as

A. directional

B. unidirectional

C. bidirectional

D. omnidirectional

MCQ 32: The function of the data link control includes

A. framing

B. flow and error control

C. software implemented protocols

D. All of above

MCQ 33: In stop and wait ARQ, acknowledgement number is announced in the sequence of

A. next frame

B. previous frame

C. zeros

D. None of above

MCQ 34: The value of the payload field in Point to Point Protocol frames is

A. 1 byte constant

B. 2 byte constant

C. variable

D. 4 bytes constant

MCQ 35: The send window in the Go-Back-N Protocol is an abstract concept defining an imaginary box with

A. one variable

B. two variables

C. three variables

D. four variables

MCQ 36: In Stop-and-Wait ARQ Protocol, the sender of frame has a control variable that holds the sequence number for the next frame to be sent is called

A. Sn

B. random numbers

C. acknowledgement number

D. Rn

MCQ 37: The function that is used to take a data packet from the network layer is

A. WaitForEvent()

B. GetData()

C. MakeFrame()

D. SendFrame()

MCQ 38: In transition phases of Point to Point Protocol, if authentication is successful then connection transfers to the

A. networking phase

B. open phase

C. establish phase

D. terminating phase

MCQ 39: In the Challenge Handshake Authentication Protocol (CHAP), the packet that is used by the user to return the result of the calculation is called

A. challenge

B. success

C. response

D. failure

MCQ 40: In the control field of V frame, the code of the command "Unnumbered poll" is

A. 00 001

B. 00 100

C. 10 001

D. 11 110

MCQ 41: When a message is carried in one very large frame, even a single-bit error would require the retransmission of the

A. sender address

B. destination address

C. whole message

D. half message

MCQ 42: If Point to Point Protocol is carrying data from OSI Network layer, the value of the protocol field is

A. 0x0020

B. 0x0021

C. 0x0022

D. 0x0023

MCQ 43: In the Go-Back-N Protocol, the size of the sender and receiver window must be at most one-half of 2^m in

A. Selective Repeat Automatic Repeat Request

B. Stop and Wait

C. Go Back-N Automatic Repeat Request

D. Simplest Protocol

MCQ 44: In Link Control Protocol packets, the code of 0x01 is used to represent the packet type of

A. Code-reject

B. Configure-request

C. Echo-request

D. discard request

MCQ 45: The protocol that has no flow or error control is called

A. Simplest Protocol

B. Stop and Wait

C. Go Back-N Automatic Repeat Request

D. Selective Repeat Automatic Repeat Request

MCQ 46: The Challenge Handshake Authentication Protocol (CHAP) provides greater security than

A. Network Control Protocol

B. Link Control Protocol

C. High-level Data Link Protocol

D. Password Authentication Protocol

MCQ 47: In Point to Point Protocol, the framing techniques done according to the

A. Bit oriented Protocol

B. Byte oriented Protocol

C. High-level Data Link Protocol

D. Link Control Protocol

MCQ 48: In data link layer, the term that is used to separate a message from one source to a destination is called

A. software implemented protocols

B. framing

C. error control

D. flow control

MCQ 49: APs stands for

A. Address Phases

B. Address Protocols

C. Authentication Phases

D. Authentication Protocols

MCQ 50: Point-to-Point Protocol defines the format of the frame to be exchanged between

A. devices

B. links

C. Internet

D. protocols

MCQ 51: The field of Point to Point Protocol frame that refers to the constant value of 11000000 is called

A. Frame Check Sequence field

B. Address Field

C. Control Field

D. Protocol Field

MCQ 52: The two main functions of the data link layer are

A. hardware link control and media access control

B. data link control and protocol access control

C. data link control and media access control

D. both a and c

MCQ 53: The piggybacking is used to improve the bidirectional protocol's

A. performance

B. timing

C. efficiency

D. error control

MCQ 54: In Point to Point Protocol, the frame starts and ends with

A. control field

B. payload field

C. protocol field

D. flag field`

MCQ 55: The PPP is a byte-oriented protocol using byte stuffing with the escape byte

A. 1111101

B. 101111111

C. 10000000

D. 11101111

MCQ 56: The address field of PP protocol is a constant value and set to

A. 11110000

B. 11110000

C. 0

D. 11111111

MCQ 57: The optional phase of the Point to Point Protocol is

A. dead

B. open

C. terminate

D. authenticate

MCQ 58: The service that is missing in the Point to Point Protocol is

A. Flow control

B. error detection

C. error correction

D. system management

MCQ 59: High-level Data Link Control is a

A. connectionless protocol

B. byte-oriented protocol

C. bit-oriented protocol

D. None

MCQ 60: The size of the receiver window of the Go-Back-N Protocol is always

A. 0

B. 1

C. 2

D. 3

MCQ 61: If the value of the code subfield of control field for S frame is 00, it is

A. Selective Reject S-frame

B. Reject S-frame

C. Receive Not Ready S-frame

D. Receive Ready S-frame

MCQ 62: In the Go-Back-N Protocol, the sequence numbers are modulo

A. 2^m

B. 2^{m+1}

C. 2^n

D. 2^{n+1}

MCQ 63: High-level Data Link Control (HDLC) implements the mechanisms of

A. Stop and Wait

B. Selective repeat

C. Go Back

D. Auto Repeat Request

MCQ 64: In the control field of V frame, the code 00 000 is used for the command of

A. Reset

B. Frame reject

C. Unnumbered information

D. Unnumbered acknowledgment

MCQ 65: The field that defines the length of the entire Link Control Protocol packet is called

A. ID field

B. control field

C. information field

D. length field

Chapter 10

Data Transmission: Telephone and Cable Networks Multiple Choice Questions

MCQ 1: The services of WorldCom, Sprint and Verizon are provided by

A. inter-LATA

B. intra-LATA

C. LATA

D. local exchange carrier

MCQ 2: The cable modem for data transmission, is similar to

A. high-bit-rate digital subscriber

B. asymmetric DSL modem

C. very high-bit-rate digital subscriber line modem

D. asymmetric DSL lite

MCQ 3: V.90 modems with a bit rate of 56,000 bps are called

A. 56K modem

B. 56000 modem

C. 56 modem

D. 5600 Modem

MCQ 4: The Very high-bit-rate Digital Subscriber Line's (VDSAL) downstream rate is

A. 768 kbps

B. 1.5 Mbps

C. 1.5-6.1 Mbps

D. 25-55 Mbps

MCQ 5: The type of signaling that have the same circuit and is used for both signaling and voice communication is called

A. out-band

B. in-band

C. signal transport ports

D. signal points

MCQ 6: The Asymmetric DSL is used the line code of

A. DMT

B. 2B1Q

C. T-1line

D. None of them

MCQ 7: In data over cable system interface specification, the downstream communication has only one

A. send

B. receiver

C. channel

D. media

MCQ 8: The coaxial cable has a bandwidth that ranges from

A. 5- 750MHz

B. 10-300 MHz

C. 5-550 MHz

D. 10-3000MHz

MCQ 9: When the Cable TV is used for data transfer then the downstream band has

A. 11 channels

B. 22 channels

C. 33 channels

D. 44 channels

MCQ 10: Communication is bidirectional in

A. Traditional cable TV

B. Hybrid Fiber Coaxial TV network

C. radio networks

D. Both B and C

MCQ 11: If a subscriber needs to provide free connections for other subscribers, it can request the

A. 800 service

B. 900 service

C. wide-area telephone service

D. digital data service

MCQ 12: The distance of the Symmetric Digital Subscriber Line (SDSL) is

A. 18000

B. 12000

C. 10000

D. 30000

MCQ 13: The cable modem transmission system receives data from the internet and passes them to the

A. combiner

B. subscriber

C. destination address

D. internet

MCQ 14: The protocol that is used in the signaling network is called

A. signal transport ports

B. signaling network

C. Signaling System Seven

D. service control point

MCQ 15: Communication in the traditional cable TV network is

A. bidirectional

B. unidirectional.

C. omnidirectional

D. None

MCQ 16: The bandwidth of analog switched service in between

A. 300 and 3300 Hz

B. 0 and 4000 Hz

C. 600 to 3000 Hz

D. 2400Hz

MCQ 17: MTP stands for

A. Message transfer port

B. Message telephone port

C. message telephone part

D. message transport part

MCQ 18: The Asymmetric Digital Subscriber Line (ADSL), Very high-bit-rate Digital Subscriber Line (VDSL), High-bit-rate Digital Subscriber Line (HDSL) and Symmetric Digital Subscriber Line (SDSL) is referred to as

A. All DSL

B. yDSL

C. nDSL

D. xDSL

MCQ 19: DSL stands for

A. digital subscriber line

B. digital switched line

C. data subscriber line

D. data switched line

MCQ 20: Downstream data are modulated using the

A. 64-QAM modulation

B. 68-QAM modulation

C. 70-QAM modulation

D. 100-QAM modulation

MCQ 21: An Asymmetric Digital Subscriber Line (ADSL) is not suitable for

A. games

B. businesses

C. residential users

D. downloading

MCQ 22: ADSL is an asymmetric communication technology designed for

A. students

B. businesses

C. residential users

D. None of above

MCQ 23: The extra bit in modem is used for

A. error correction

B. error detection

C. noise

D. distortion

MCQ 24: Cable TV networks started to distribute broadcast video signals to locations in the late

A. 1940s

B. 1950s

C. 1960s

D. 1970s

MCQ 25: Telephone networks use

A. message switching

B. packet switching

C. circuit switching

D. None

MCQ 26: The High-bit-rate Digital Subscriber Line (HDSL) uses two twisted pairs to achieve

A. full-duplex transmission

B. half-duplex transmission

C. decoding

D. encoding

MCQ 27: The effective bandwidth of a telephone line being used for data transmission is

A. 30 Hz

B. 300Hz

C. 600Hz

D. 2400Hz

MCQ 28: The theoretical downstream data rate is

A. 10 Mbps

B. 20 Mbps

C. 30 Mbps

D. 40 Mbps

MCQ 29: The standard V92 can upload data at the rate of

A. 144 kbps

B. 33.6 kbps

C. 48 kbps

D. 56 kbps

MCQ 30: The channels can be shared in an area with many subscribers with the help of

A. multi casting

B. frequency sharing

C. data sharing

D. time sharing

MCQ 31: The transmission media that handle the communication between offices is called

A. local loops

B. Trunks

C. LATA

D. local service exchange

MCQ 32: The V.34bis modem provides a bit rate of 28,800 with a

A. 960-point constellation

B. 1250-point constellation

C. 1460-point constellation

D. 1664-point constellation

MCQ 33: The existing local loops with Asymmetric Digital Subscriber Line (ADSL) can handle bandwidths up to

A. 1.1 Hz

B. 1.1 KHz

C. 1.1 MHz

D. 1.1GHz

MCQ 34: The theoretical upstream data rate in QPSK is

A. 12 Mbps

B. 14 Mbps

C. 18 Mbps

D. 20 Mbps

MCQ 35: In downstream sharing, if the address matches then the data are

A. kept

B. discarded

C. removed

D. sent

MCQ 36: The maximum data rate of 64 kbps is of

A. 800 service

B. 900 service

C. Digital data service

D. analog leased line

MCQ 37: The tasks of data transfer and signaling are separated in modern

A. data transfer network

B. signaling network

C. radio networks

D. telephone networks

MCQ 38: The Asymmetric Digital Subscriber Line- Lite (ADSL Lite) uses carriers for

A. 512 DMT

B. 64 DMT

C. 256 DMT

D. 900 DMT

MCQ 39: The upstream data bandwidth is

A. 41 MHz

B. 37 MHz

C. 12 MHz

D. 30 MHz

MCQ 40: HFC stands for

A. High Fiber cable

B. High Frequency Cable

C. Hybrid Fiber-Coaxial

D. Hybrid Frequency Cable

MCQ 41: The downstream data occupies

A. upper band

B. lower band

C. middle band

D. None of above

MCQ 42: The minimum time required to download one million bytes of information for V32 modem would be

A. 800 s

B. 834 s

C. 900 s

D. 1000 s

MCQ 43: The modulation technique that has become standard for Asymmetric Digital Subscriber Line (ADSL) is called the

A. discrete multitoned technique

B. adaptive technique

C. quantity asynchronous modulation

D. Frequency modulation

MCQ 44: The High-bit-rate Digital Subscriber Line (HDSL) was designed as an alternative to

A. ADSL

B. T-1line

C. DSL

D. DMT

MCQ 45: Switched/56 service is the digital version of an

A. analog leased service

B. Digital data service

C. analog switched service

D. 900 service

MCQ 46: In Discrete Multitone Technique (DMT), Channel 0 is reserved for

A. data communication

B. audio communication

C. Both A and b

D. voice communication

MCQ 47: The designers of ADSL have divided the available bandwidth in to

A. local loop evenly

B. local loop unevenly

C. unidirectional

D. both A and C

MCQ 48: The local loop has a bandwidth of

A. 400Hz

B. 4Hz

C. 40Hz

D. 4000Hz

MCQ 49: A switch connects several local loops or trunks and allows a connection between different

A. switches

B. loops

C. trunks

D. subscribers

MCQ 50: In Discrete Multitone Technique (DMT), Channel 1-5 is used for

A. idle position

B. voice communication

C. data communication

D. error detection

MCQ 51: In Signaling System Seven (SS7), the transport layer of OSI model is equivalent to

A. SCCP

B. TUP

C. TCAP

D. ISUP

Chapter 11

Digital Transmission Multiple Choice Questions

MCQ 1: In OOOVBOVB, V stands for violation and B stands for

A. Bit

B. Baud

C. Bandwidth

D. Bipolm

MCQ 2: A no periodic signal has changed to a periodic signal with the period equal to

A. 2 times the bit duration

B. 4 times the bit duration

C. 8 times the bit duration

D. 12 times the bit duration

MCQ 3: The average signal rate of 2BlQ is

A. N

B. N/2

C. N/4

D. N/6

MCQ 4: NRZ-L and NRZ-I both have an average signal rate of

A. N

B. N/8

C. N/4

D. N/2

MCQ 5: The last step in Pulse Code Modulation (PCM) is

A. Quantization

B. Sampling

C. Encoding

D. Modulation

MCQ 6: The relationship between data rate and signal rate depends on the value of

A. data rate (N)

B. case factor (c)

C. ratio (r)

D. signal element(s)

MCQ 7: HDB3 substitutes four consecutive zeros with OOOV or BOOV depending on the number of nonzero pulses after

A. middle substitution

B. first substitution

C. last substitution

D. both b and c

MCQ 8: The minimum bandwidth of the digital signal is nb times greater than the bandwidth of the

A. analog signal

B. digital data

C. analog data

D. None of above

MCQ 9: In which scheme all the signal levels are on one side of the time axis?

A. Unipolar

B. Bipolar

C. Polar

D. Multi level

MCQ 10: Data encoding is not possible if

A. 2m < Ln

B. 2m > Ln

C. 2m = Ln

D. 2m # Ln

MCQ 11: The Nyquist sampling rate is

A. f

B. 2f

C. 4f

D. 6f

MCQ 12: How many communication channels are needed for serial transmission?

A. 1 channel

B. n channels

C. n+1 channels

D. None of above

MCQ 13: The block coding scheme that provides greater error detection capability than 4B/5B is

A. 8RIlOR

B. R8ZS

C. NRZ-L

D. NRZ-I

MCQ 14: In synchronous transmission, we send bits one after another without

A. Start bit

B. Stop bit

C. gap bit

D. All of above

MCQ 15: The bit rate for 1000 baud, FSK, baud rate would be

A. 1000 bps

B. 1500 bps

C. 2000 bps

D. 100 bps

MCQ 16: A system is using NRZ-I to transfer 10-Mbps data. What would be minimum bandwidth?

A. 500 kHz.

B. 1000 KHz

C. 2000 KHz

D. 5000 KHz

MCQ 17: What is the number of bits per baud for PSK with four different phases?

A. 3

B. 4

C. 2

D. 5

MCQ 18: In Return to Zero (RZ), the signal changes not between bits but

A. before the bit

B. after the bit

C. doesn't changes at all

D. during the bit

MCQ 19: Line coding, block coding and scrambling are three techniques of

A. Digital to digital conversion

B. Digital to analog conversion

C. Analog to analog conversion

D. Analog to digital conversion

MCQ 20: The coding scheme that was designed to be used in combination with None Return to Zero- Invert (NRZ-I) is

A. BSZS

B. 8RIlOR

C. 4D/5D

D. R8ZS

MCQ 21: In real life, most digital signals have bandwidth

A. infinite

B. Zero

C. Constant

D. None of above

MCQ 22: The term that means data is sent over four wires at the same time is

A. 4S

B. 4D

C. 4W

D. 4R

MCQ 23: The transmission that is used without the timing signal is called

A. synchronous

B. asynchronous

C. parallel

D. isochronous

MCQ 24: The unit of the signal rate is

A. Bits per second

B. Baud

C. micro seconds

D. Hertz

MCQ 25: The term that is used as an alternative to None Return to Zero (NRZ) is

A. Polar

B. Unipolar

C. multi transition

D. bipolar

MCQ 26: The value of the error for any sample is less than

A. 4Δ

B. 2Δ

C. Δ

D. $\Delta/2$

MCQ 27: In asynchronous transmission, we send one start bit that is

A. 0

B. 1

C. 10

D. 11

MCQ 28: Line coding converts a sequence of

A. Frames to digital signal

B. bits to a digital signal

C. Bytes to digital signal

D. Packets of data to digital signals

MCQ 29: Line coding, block coding and scrambling are the techniques of converting the

A. analog data to analog signals

B. Digital data to digital signals

C. analog data to digital signals

D. digital signals to digital data

MCQ 30: The actual bandwidth of a digital signal is infinite, the effective band width would be

A. Finite

B. Infinite

C. Always Zero

D. None

MCQ 31: The technique that is most common to change an analog signal to digital data is

A. delta modulation

B. pulse code modulation

C. sampling

D. Quantizing

MCQ 32: The 8BIlOB block coding is a combination of

A. 5B/6B and 3B/3B

B. 5B/6B and 3B/4B

C. 5B/6B and 4B/4B

D. 4B/5B and 3B/4B

MCQ 33: In 8B6T, the minimum bandwidth is very close to

A. 2BIQ

B. 8B4Q.

C. 6N18

D. MLT-3

MCQ 34: What would be the minimum bandwidth of Manchester and differential Manchester?

A. 4 times that of NRZ

B. 4times that of RZ

C. 2times that of NRZ

D. 8times that of RZ

MCQ 35: The inverse of the sampling interval is called the

A. sampling rate

B. delta rate

C. baud rate.

D. bit rate

MCQ 36: A signal cannot be sampled with an

A. infinite frequency

B. finite frequency

C. infinite bandwidth

D. finite bandwidth

MCQ 37: In alternate mark inversion, mark means

A. 0

B. 1

C. infinity

D. None of above

MCQ 38: A telephone line cannot pass frequencies below

A. 800Hz

B. 600HZ

C. 400Hz

D. 200Hz

MCQ 39: A term that refers to a code that is generated to detect some or all of errors occurred during transmission is

A. Baseline Wandering

B. Built in error detection

C. Self-detect error code

D. Bug resolver

MCQ 40: A sequence that creates the constant zero voltage does not have a

A. Error detection

B. Synchronization

C. DC component

D. Complexity

MCQ 41: In 8B6T, each signal pattern has a weight of 0 or

A. 1

B. -1

C. -2

D. infinity

MCQ 42: For Pulse Code Modulation (PCM), the quantization error is much greater than

A. decoding

B. Encoding

C. delta modulation

D. multiplexing

MCQ 43: Baud rate is the number of

A. signal elements per second

B. bits per second

C. Frames per second

D. None

MCQ 44: MLT-3 schemes uses three levels

A. 0, V,-V

B. 0,1,2

C. M,L,T

D. 0,-1,-2

MCQ 45: Block coding is normally referred to as mBlnB coding; it replaces each m-bit group with an

A. n-bit group

B. n-1 bit group

C. n+1 bit group

D. None

MCQ 46: The change or lack of change in the level of the voltage determines the value of the bit is known as

A. NRZ

B. NRZ-L

C. NRZ-I

D. RZ

MCQ 47: Which technique is always needed in digital to digital conversion?

A. Scrambling

B. Block coding

C. Line coding

D. Both B and C

MCQ 48: The term that refers to as mBlnB coding, it replaces each m bit group with an n bit group is called

A. Multilevel technique

B. Polar techniques

C. Scrambling technique

D. block coding scheme

MCQ 49: Bipolar with S-Zero Substitution (BSZS) is commonly used in

A. South America

B. Central America

C. North America

D. Latin America

MCQ 50: Baseline wandering is prevented by the

A. Scrambling technique

B. block coding scheme

C. Line coding scheme

D. None of above

MCQ 51: The minimum bandwidth of Manchester and differential Manchester is

A. 2 times that of NRZ

B. 2 times that of NRZ-L

C. 2 times that of NRZ-I

D. 2 times that of RZ

MCQ 52: The term that refers to the shortest unit and carries data elements is called

A. Signal element

B. data carrier

C. Single element

D. both A& B

MCQ 53: The bandwidth is proportional to the

A. baud rate

B. data rate

C. delay rate

D. bit rate

MCQ 54: Quadrature amplitude modulation is a combination of

A. BPSK and PSK

B. ASK and BPSK

C. ASK and PSK

D. BPSK and QPSK

MCQ 55: The transmission mode in which multiple bits are sent with each clock trick is

A. Parallel

B. serial

C. synchronous

D. Asynchronous

MCQ 56: Parallel transmission is good in speed but it is very

A. cheap

B. costly

C. time consuming

D. Both B and C

MCQ 57: Signal rate is also called the

A. Pulse rate

B. modulation rate

C. baud rate.

D. All of above

MCQ 58: In bipolar encoding, we use three levels: positive, zero and

A. one

B. negative

C. two

D. None

MCQ 59: In NRZ-I the inversion or the lack of inversion determines the

A. Value of the bytes

B. value of the bits

C. Status of Frame

D. None of above

MCQ 60: The most common technique to change an analog signal to digital data is called

A. Line code modulation

B. Scrambling

C. Block code modulation

D. pulse code modulation

MCQ 61: Asynchronous, synchronous and isochronous are three subclasses of serial transmission to send

A. parallel data

B. discrete data

C. Continuous data

D. None

MCQ 62: If the delta is positive, the modulator process records

A. 0

B. 1

C. -1

D. infinity

MCQ 63: B8ZS substitutes eight consecutive zeros with

A. OOOVB1VB

B. OOOVBOVB

C. 111VBOVB

D. O1OVBOVB

MCQ 64: The idea of Return to Zero (RZ) and Non Return to Zero-Level (NRZ-L) are combined into the

A. Manchester

B. Differential Manchester

C. Multilevel bipolar transition

D. Multi transition scheme

MCQ 65: In the adaptive delta modulation, for better performance, the value of delta is

A. fixed

B. not fixed

C. infinity

D. zero

Chapter 12

Domain Name System Multiple Choice Questions

MCQ 1: DNS can be pictured as an inverted hierarchical tree structure with one root node at the top and a maximum of

A. 128 Levels

B. 129 Levels

C. 130 Levels

D. 131 Levels

MCQ 2: The name of the domain is the domain name of the node at the top of the

A. Sub Tree

B. Main Tree

C. Leaf Node

D. Bottom Tree

MCQ 3: The domain, which is used to map an address to a name is called

A. Generic Domains

B. Inverse Domain

C. Main Domains

D. Sub-Domains

MCQ 4: The term that define registered hosts according to their generic behavior, is called

A. Generic Domains

B. Main Domains

C. Super-Domains

D. Sub-Domains

MCQ 5: The DNS client adds the suffix atc.jhda.edu before passing the address to the

A. DNS Client

B. DNS Server

C. DNS Label

D. DNS Recipient

MCQ 6: The well-known port used for encapsulation by the server is

A. Port 7

B. Port 23

C. Port 53

D. Port 67

MCQ 7: Each node in the tree has a

A. Primary Name

B. Domain name.

C. DNS tree

D. All of above

MCQ 8: The Two types of records are used in DNS those are

A. Question Record

B. Answers Record

C. Resource Record

D. Both A and C

MCQ 9: In Domain Name, a full domain name always ends up at

A. 1 Node

B. 2 Nodes

C. 0 Node

D. Null Node

MCQ 10: Domain Name System (DNS), is a protocol that can be used in different

A. Layers

B. Categories

C. Platform

D. Stages

MCQ 11: In the Internet, the domain name tree is divided into three

A. Different Stages

B. Different Layers

C. Different Parts

D. Different Sections

MCQ 12: In Domain Name System (DNS), the well-known port 53 provides the services of

A. UDP

B. TCP

C. ICMP

D. Both A and B

MCQ 13: New domains can be added to DNS through a

A. Query

B. Registrar

C. Domain

D. Response

MCQ 14: FQDN stands for

A. Filled Quality Domain Name

B. False Quality Domain Name

C. Fully Qualified Domain Name

D. First Qualified Domain Name

MCQ 15: The xxx.yyy.net is a

A. PQDN

B. FQDN

C. DDNS

D. All of them

MCQ 16: A supporting program that is used by other programs such as e-mail is called

A. DNS

B. SMTP

C. IP

D. Server/Client

MCQ 17: In DNS the solution to problems is to distribute the information among many computers known as

A. DNS Client

B. DNS Server

C. DNS Provider

D. DNS Recipient

MCQ 18: The country domains section uses two-character country

A. Generations

B. Abbreviations

C. Notations

D. Zones

MCQ 19: A registrar first verifies that the requested domain name is unique and then enters it into the DNS

A. Database

B. Servers

C. Domains

D. Protocol

MCQ 20: In Domain Name System (DNS), a contiguous part of the entire tree is called

A. Host

B. Server

C. Domain

D. Zone

MCQ 21: To register, the organization needs to give the name ofits server and the IP address of

A. Server

B. Clients

C. Zones

D. All of above

MCQ 22: A server whose zone consists of the whole tree is called

A. Root Server

B. Sub Server

C. IP Server

D. Host Server

MCQ 23: A root server's zone is the entire

A. STP Tree

B. DNS Tree

C. HostTree

D. Sub-Tree

MCQ 24: If the server has the information, it satisfies the

A. Host

B. Server

C. Zone Server

D. Resolver

MCQ 25: Domain Name System (DNS), allows domains to be divided further into

A. Large-Domains

B. Down-Domains

C. Super-Domains

D. Sub-Domains

MCQ 26: A DNS client/server program can support an e-mail program to find the IP address of an

A. E-Mail Server

B. DNS Server

C. Email Recipient

D. DNS Recipient

MCQ 27: Mapping a name to an address or an address to a name is called

A. Name-address Generations

B. Name-address Abbreviations

C. Name-address Resolution

D. Name-address Information

MCQ 28: In DNS messages a section consisting of one or more resource records is called

A. Question Section

B. Template Section

C. Resource Section

D. Answer Section

MCQ 29: To provide security and prevent unauthorized changes in the DNS records an authentication mechanism is used, known as

A. DNS

B. DDNS

C. DDN

D. SDN

MCQ 30: A primary server loads all information from the

A. IP File

B. Disk File

C. Host File

D. Host Server

MCQ 31: In Domain Name Space (DNS), when the Internet was small, mapping was done by using a

A. IP File

B. Host File

C. Host IP

D. Host Server

MCQ 32: In Domain Name Space, the null suffix defines

A. IP

B. Server

C. Host

D. Nothing

MCQ 33: The information contained in the domain name space must be

A. Divided

B. Shared

C. Stored

D. Checked

MCQ 34: In Domain Name Space, if a label is not terminated by a null string, it is called a

A. Partially Qualified Domain Name

B. Partially Qualified Domain Node

C. Partially Qualified Data Node

D. Partially Qualified Data Name

MCQ 35: Each name space is made of several parts in

A. Name Space Domain

B. Domain Name Space

C. Hierarchical Name Space

D. Flat Name Space

MCQ 36: The main disadvantage of a flat name space is that it cannot be used in a large

A. Protocol Domain

B. Internet

C. Email

D. System

MCQ 37: A root server is a server whose zone consists of the

A. Subdomains

B. Zone Files

C. Whole tree

D. DNS servers

MCQ 38: In Domain Name, a full domain name is a sequence of labels separated by

A. Dots

B. Colons

C. Semicolons

D. Question marks

MCQ 39: The domain names are always read from the

A. Node up to the root

B. Node down to the leaf

C. Root to Child

D. All of them

MCQ 40: A root server usually does not store any information about domains but delegates its authority to the

A. Main Server

B. Sub Server

C. Other Server

D. Host Server

MCQ 41: The generic domains, for specifying an organization type are

A. 6

B. 8

C. 10

D. 14

MCQ 42: A domain name "hello.customer.info." Is

A. City domain

B. Generic domain

C. Country domain

D. Sub-domain

MCQ 43: There are two types of records in

A. SMTP

B. ICMP

C. DNS

D. IP

MCQ 44: A name is assigned to an address in

A. Name Space

B. Domain Name Space

C. Flat Name Space

D. Hard Name Space

MCQ 45: A domain is a sub tree of the

A. domain name space

B. PQDN

C. FQDN

D. FNS

MCQ 46: In Domain Name System (DNS), the server makes a database called

A. Zone IP

B. Zone File

C. Zone Domain

D. Zone Server

MCQ 47: If the size of the response message is more than 512 bytes, a Connection is used called

A. DNS connection

B. ICMP connection

C. STMP connection

D. TCP connection

MCQ 48: Fully Qualified Domain Name (FQDN), defines the name of the

A. IP

B. Host

C. Node

D. Root

MCQ 49: Domain Name System (DNS), has two types of messages

A. Query and Resolver

B. Hosted and Generic

C. Query and Responsive

D. Resolver and Informative

MCQ 50: In Domain Name System (DNS) messages, the length of header is

A. 08 Bytes

B. 12 Bytes

C. 14 Bytes

D. 24 Bytes

MCQ 51: Each node in the tree has a label, which is a string with a maximum of

A. 38 characters

B. 47characters

C. 52 characters

D. 63 characters

MCQ 52: DDNS stands for

A. DYNAMIC DOMAIN NAME SOLUTION

B. DYNAMIC DOMAIN NAME SERVER

C. DYNAMIC DOMAIN NAME SYSTEM

D. DYNAMIC DOMAIN NUMBER SECTION

MCQ 53: The System in which the names are defined in an inverted-tree structure with the root at the top is called

A. Name Space

B. Domain Name Space

C. Hierarchical Name Space

D. Flat Name Space

MCQ 54: The first address part of Hierarchical Narne Space can define the

A. Name of an organization

B. Nature of the organization

C. Departments in the organization

D. DataType

MCQ 55: The DNS clients are known as

A. Nodes

B. Resolvers

C. Sub-Domain

D. Participator

MCQ 56: If a label is terminated by a null string, it is called a

A. PQDN

B. FQDN

C. DNS

D. NS

Chapter 13

Error Detection and Correction Multiple Choice Questions

MCQ 1: How many bits in the data unit has changed in single bit error?

A. only 1

B. two bits

C. three bits

D. four bits

MCQ 2: To guarantee the detection of up to s errors in all cases, the minimum hamming distance in a block code must be

A. s

B. s+1

C. s-1

D. 0

MCQ 3: The cyclic codes are fast when these are implemented in

A. software

B. hardware

C. Local area network

D. Both A and B

MCQ 4: In block coding, we divide our message into blocks, is called

A. code blocks

B. packet blocks

C. code words

D. datawords

MCQ 5: Find the parity bit for 1001011

A. 0

B. 1

C. 2

D. None

MCQ 6: All burst errors of a cyclic code will be detected when

A. $L > r+1$

B. $L = r$

C. $L \geq r$

D. $L \leq r$

MCQ 7: The process of modulo-2 binary division is the same as the familiar

A. multiplication process

B. division process

C. addition process

D. subtraction process

MCQ 8: Traditionally, the Internet checksum is

A. 8-bit

B. 16-bit

C. 24-bit

D. 32-bit

MCQ 9: If the value of checksum is 0, then the message is

A. accepted

B. rejected

C. sent back

D. resend

MCQ 10: CRC stands for

A. combine resistance check

B. cyclic redundancy code

C. combine redundancy code

D. cyclic redundancy check

MCQ 11: In the isolated double errors of the cyclic code, the generator cannot divide the term x^t+1 where t is in between

A. 0 and n-1

B. 0 and n

C. 0 and n+1

D. 0 and n+2

MCQ 12: Shifting to the left is accomplished by

A. addition

B. subtraction

C. multiplication

D. division

MCQ 13: In a linear block code, the exclusive OR (XOR) of any two valid code words creates

A. valid codeword

B. invalid codeword

C. valid data

D. invalid data

MCQ 14: If generator of the cyclic code has at least two terms and the rightmost bit is 1 then error cannot be divided by

A. syndrome

B. error

C. dataword

D. generator

MCQ 15: In the bit pattern, the shifting to the right means

A. adding extra 0s as rightmost bits

B. deleting some rightmost bits

C. adding extra 1s as rightmost bits

D. deleting some leftmost bits

MCQ 16: A generator of a cyclic code that contains a factor of x + 1 can detect all

A. even number errors

B. odd number errors

C. single bit errors

D. multiple bit errors

MCQ 17: To guarantee correction of up to t errors in all cases, the minimum hamming distance in a block code must be

A. 2k

B. 2k-1

C. 2t+1

D. 2t+2

MCQ 18: There is no error in the received code word, if the syndrome is

A. maximum

B. minimum

C. 0

D. 1

MCQ 19: A simple parity-check code has dmin =

A. 0

B. 1

C. 2

D. 3

MCQ 20: The standard polynomial that is used by the popular protocol of CRC-16 for the

A. ATM header

B. ATMAAL

C. HDLC

D. LANs

MCQ 21: The Internet has been using a checksum of

A. 2 bit

B. 4 bit

C. 8 bit

D. 16 bit

MCQ 22: A pattern of 0s and 1s can be represented as a

A. cyclic code

B. modulo-2

C. polynomial

D. coefficient

MCQ 23: Forward error correction is possible when the number of errors is

A. zero

B. small

C. large

D. infinite

MCQ 24: Any coding scheme needs to have at least the parameters of

A. codeword size

B. dataword size

C. minimum hamming distance

D. All of them

MCQ 25: Single-bit errors are the least likely type of error in

A. parallel data transmission

B. serial data transmission.

C. unidirectional transmission

D. bidirectional transmission

MCQ 26: In a cyclic code, generator polynomial is actually the

A. multiplier

B. divisor

C. polynomial

D. All of above

MCQ 27: There are two main methods of

A. error detection

B. error correction

C. parity bit errors

D. redundancy

MCQ 28: The cyclic redundancy check is used in

A. codewords

B. datawords

C. networks

D. encryption

MCQ 29: In error detection and correction process, we use geometric approach to define

A. codeword

B. territory

C. block code

D. All of above

MCQ 30: The received code word of the cyclic code is the sum of the sent code word and the

A. dataword

B. generator

C. error

D. syndrome

MCQ 31: In a cyclic code, the decoder is failed to detect any error, when syndrome is

A. zero

B. non zero

C. one

D. negative value

MCQ 32: What is the maximum effect of a 2-ms burst of noise on data transmitted for 12 kbps?

A. 2 bits

B. 4 bits

C. 16 bits

D. 24 bits

MCQ 33: The divisor line and XOR are missing if the corresponding bit in the divisor is

A. 0

B. 1

C. 10

D. 11

MCQ 34: The unsigned representation of numbers by one's complement can represent

A. positive number

B. negative number

C. Both A and B

D. infinite numbers

MCQ 35: The checksum is used in the Internet by several protocols although not at the

A. session layer

B. transport layer

C. network layer

D. data link layer

MCQ 36: A simple parity-check code can detect

A. odd number of errors

B. even number of errors

C. positive number of errors

D. negative number of errors

MCQ 37: The hamming distance can easily be found if we apply the

A. XOR operation

B. XNOR operation

C. OR operation

D. AND operation

MCQ 38: In subtraction of modulo-2 arithmetic, 0-1 =

A. 0

B. -1

C. 1

D. infinity

MCQ 39: In modulo-N arithmetic, we use only the integers in the range

A. 0 to N

B. 0 to N-1

C. 0 to N-2

D. 0 to N-3

MCQ 40: To detect or correct errors, we send extra bits with data. It is called

A. redundancy

B. correction

C. detection

D. Both B and C

MCQ 41: A good polynomial generator of the cyclic code have at least

A. zero term

B. one term

C. two terms

D. three terms

MCQ 42: The dataword is organized in the form of

A. rows

B. tables

C. Graphs

D. charts

MCQ 43: A simple parity-check code is the most familiar

A. error-correcting code

B. error-detecting code

C. dataword

D. Both A& B

Chapter 14

Multimedia Multiple Choice Questions

MCQ 1: A video consists of a sequence of

A. Frames

B. Signals

C. Packets

D. Slots

MCQ 2: If the frames are displayed on the screen fast enough, we get an impression of

A. Signals

B. Motions

C. Packets

D. Bits

MCQ 3: H.323 uses G.71 or G.723.1 for

A. Compression

B. Communication

C. Controlling

D. Conferencing

MCQ 4: To receive the signal, a translator is needed to decode the signal and encode it again at a

A. High Quality

B. Lower Quality

C. Same Quality

D. Bad Quality

MCQ 5: Session Initiation Protocol (SIP), is very

A. Independent

B. Flexible

C. Dependent

D. Complex

MCQ 6: Establishing a session in Session Initiation Protocol (SIP), requires a three-way

A. Protocols

B. System

C. Ports

D. Handshake

MCQ 7: Moving Picture Experts Group (MPEG) is used to compress

A. Frames

B. Images

C. Audio

D. Video

MCQ 8: A combination of an encryption algorithm and a decryption algorithm is called a

A. plain text

B. cipher

C. original text

D. shift cipher

MCQ 9: The most common compression technique that is used to create CD-quality audio is based on the perceptual encoding technique is called

A. Predictive Encoding

B. Perceptual Encoding

C. MPEG

D. JPEG

MCQ 10: In Audio and Video Compression, each frame is divided into small grids, called picture elements or

A. Frame

B. Packets

C. Pixels

D. Mega Pixels

MCQ 11: Streaming stored audio/video, the files are compressed and stored on a

A. IP

B. Server

C. Domain

D. Internet

MCQ 12: live streaming is still using Transmission Control Protocol (TCP) and multiple unicasting instead of

A. Unicasting

B. Multicasting

C. Layered Control

D. Protocol Control

MCQ 13: Moving Picture Experts Group (MPEG-2), was designed for high-quality DVD with a data rate of

A. 3 to 6 Mbps

B. 4 to 6 Mbps

C. 5 to 6 Mbps

D. 6 to 6 Mbps

MCQ 14: Joint Photographic Experts Group (JPEG) is used to compress

A. Music

B. Pictures

C. Images

D. Frames

MCQ 15: Real-time traffic needs the support of

A. Unicasting

B. Multicasting

C. Layered Control

D. Protocol Control

MCQ 16: We can divide audio and video services into

A. 1 broad categories

B. 2 broad categories

C. 3 broad categories

D. 4 broad categories

MCQ 17: In Video Compression, an independent frame that is not related to any other frame is called

A. B-Frame

B. C-Frame

C. I-Frame

D. P-Frame

MCQ 18: The RTP uses a temporary even-numbered

A. RTCP

B. SMTP

C. UDP port

D. None

MCQ 19: The HTTP client accesses the Web server by using the

A. SEND message

B. GET message

C. AUTO receive message

D. None

MCQ 20: In Joint Photographic Experts Group (JPEG), a gray scale picture is divided into blocks of

A. 5 X 5 pixels

B. 6 X 6 pixels

C. 7 X 7 pixels

D. 8 X 8 pixels

MCQ 21: MP3 produces three data rates from 96 Kbps to

A. 128 Kbps

B. 164 Kbps

C. 256 Kbps

D. 320 Kbps

MCQ 22: For music, digitize signals should be compressed at

A. 1.41 I-MHz

B. 1.42 I-MHz

C. 1.45 I-MHz

D. 1.48 I-MHz

MCQ 23: Sometimes real-time traffic needs

A. Organization

B. Traffic

C. Channelizing

D. Translation

MCQ 24: In Real-Time Transport Protocol (RTP), the source periodically sends a source description message to give additional information about

A. Message

B. Itself

C. Protocols

D. Packets

MCQ 25: Audio compression can be used for

A. Speech or Music

B. Voice and Data

C. Picture and Colors

D. Video and Voice

MCQ 26: In Real Time Interactive Audio Video, conferencing requires two way communication between

A. receivers and senders

B. Packet to Frames

C. Pixels to Packets

D. Frames to Pixels

MCQ 27: In Real Time Interactive Audio Video, Jitter is introduced in real-time data by the delay between

A. Frames

B. Layers

C. Pixels

D. Packets

MCQ 28: Session Initiation Protocol (SIP), has a mechanism that finds the

A. Domain

B. System

C. IP Address

D. Terminal

MCQ 29: In Audio and Video Compression, voice is sampled at 8000 samples per second with

A. 5 bits per sample

B. 6 bits per sample

C. 7 bits per sample

D. 8 bits per sample

MCQ 30: In Voice Over IP, Term SIP stands for

A. Session Initiation Protocol

B. Session Initiation Port

C. Session Initiation Path

D. Session Initiation Packet

MCQ 31: In Real-Time Transport Protocol (RTP), A source sends a bye message to shut down a

A. System

B. Frames

C. Protocol

D. Stream

MCQ 32: In Audio and Video Compression, term RBG expresses

A. Red, Blue, Green

B. Red, Black, Grey

C. Rate, Bit, Giga bit

D. Red, Bluish, Greyish

MCQ 33: To perform the tracking of an IP, Session Initiation Protocol (SIP), uses the concept of

A. Registration

B. Termination

C. Streaming

D. Translation

MCQ 34: A simple session using SIP consists of three modules: establishing, communicating and

A. Translation

B. Conversion

C. Streaming

D. Termination

MCQ 35: The Real-time traffic needs the support of

A. multicasting

B. Translation

C. integration

D. security

MCQ 36: Session Initiation Protocol (SIP), is designed to be independent of the underlying

A. Linear Layer

B. Data Link Layer

C. Transport Layer

D. Presentation Layer

MCQ 37: In the lowest resolution a color frame is made of

A. 1024 x 768 pixels

B. 800 X 600 pixels

C. 1152 X 864 Pixels

D. 1280 X 1080 pixels

MCQ 38: In Real Time Interactive Audio Video, data are stored in the buffer at a possibly variable

A. Pixels

B. Packets

C. Rates

D. Bytes

MCQ 39: In Real Time Interactive Audio Video, to prevent jitter, we can time-stamp the packets and separate the arrival time from the

A. Frame Time

B. Playback Time

C. Pixels Time

D. Packet Time

MCQ 40: Real-time Transport Protocol (RTP) is the protocol designed to handle real-time traffic on the

A. Frames

B. Internet

C. IP

D. Protocol

MCQ 41: In Session Initiation Protocol (SIP), the session can be terminated with a

A. OK Message

B. Bye Message

C. Terminate Message

D. Quit Message

MCQ 42: RTCP stands for

A. Real-time Transport Control Program

B. Real-time Transport Control Packet

C. Real-time Transport Control Protocol

D. Real-time Transport Control Path

MCQ 43: A compressed audio/video file can be downloaded as a

A. Image

B. Video

C. Frame

D. Text file

MCQ 44: When a caller needs to communicate with the callee, the caller can use the e-mail address instead of the IP address in the

A. OK Message

B. Bye Message

C. INVITE Message

D. Great Message

MCQ 45: The purpose of dividing the picture into blocks is to decrease the number of

A. Channels

B. Pixels

C. Calculations

D. Frames

MCQ 46: In Real Time Interactive Audio Video, a sequence number on each packet is required for

A. real-time traffic

B. real-time Playback

C. real-time pixels

D. real-time frames

MCQ 47: Before audio or video signals can be sent on the Internet, they need to be

A. Channelized

B. Managed

C. Digitized

D. Organized

MCQ 48: For speech, digitize signals should be compressed at

A. 128 Khz

B. 256 Khz

C. 64 Khz

D. 1152 Khz

MCQ 49: Moving Picture Experts Group (MPEG-1), was designed for a

A. PC

B. CD

C. DVD

D. Floppy

MCQ 50: Perceptual encoding is based on the science of

A. Frames

B. Music

C. Rhythm

D. psychoacoustics

MCQ 51: The media player uses the URL in the metafile to access the media server to

A. download the file

B. Upload the file

C. Stored the File

D. Stream the file

MCQ 52: In Real Time Interactive Audio Video, mixing means combining several streams of traffic into

A. 1 Stream

B. 2 Stream

C. 3 Stream

D. 4 Stream

MCQ 53: According to the Nyquist theorem, if the highest frequency of the signal is f, we need to sample the signal

A. 19 times/sec

B. 20 times/sec

C. 21 times/sec

D. 22 times/sec

MCQ 54: In temporal compression, redundant frames are

A. Channelized

B. Organized

C. Digitized

D. Removed

MCQ 55: The Primary Colors for Color TV are

A. Blue, White, Black

B. Red, Green, Yellow

C. Red, Green, Black

D. Red, Green, Blue

Chapter 15

Multiple Access Multiple Choice Questions

MCQ 1: In Carrier Sense Multiple Access (CSMA), if the station senses the medium before trying to use it then the chance of collision can be

A. Increased

B. Reduced

C. Highlighted

D. Both B and C

MCQ 2: Code Division Multiple Access (CDMA) differs from Time Division Multiple Access (TDMA) because there is no

A. bandwidth

B. link

C. carrier

D. timesharing

MCQ 3: In Carrier Sense Multiple Access (CSMA), the possibility of collision still exist because of

A. Propagation delay

B. sender-receiver delay

C. Sense delay

D. Transmit delay

MCQ 4: The protocol that is used to transmit data without any schedule time is

A. random access

B. controlled access

C. channelization

D. None of above

MCQ 5: Carrier Sense Multiple Access (CSMA) is based on the medium called

A. Listen before talk

B. Listen before sending

C. Sense before transmit

D. Sense before Collision

MCQ 6: Normally the value of the K_{max} in pure ALOHA is

A. 5

B. 10

C. 15

D. 20

MCQ 7: In Carrier Sense Multiple Access/Collision Detection (CSMA/CD), the sending station must detect

A. Collision

B. Signal

C. Sense

D. Station

MCQ 8: The Carrier Sense Multiple Access (CSMA) method was developed to increase the

A. Collision

B. Performance

C. Transmission

D. Station

MCQ 9: If the maximum propagation time in carrier sense multiple access/collision detection is 25.6 µs, the minimum size of frame is

A. 54 bytes

B. 64 bytes

C. 74 bytes

D. 84 bytes

MCQ 10: A collision of the frames could be the result when a station sends a frame and at the same time any other station tries to send a

A. Information

B. Frame

C. Station

D. All of above

MCQ 11: In polling method, the secondary stations follow its instructions and the primary stations controls the

A. transmission of frames

B. time delay

C. link

D. signals

MCQ 12: Frequency Division Multiple Access (FDMA) specifies a predetermined frequency band for the entire period of

A. Connection

B. Station

C. Communication

D. Channelization

MCQ 13: The term that refers to a physical layer technique is called

A. CDMA

B. FDMA

C. TDMA

D. TDM

MCQ 14: A network using Carrier Sense Multiple Access/Collision Detection (CSMA/CD) has a Bandwidth of

A. 2.5 mbps

B. 5 mbps

C. 7.5 mbps

D. 10 mbps

MCQ 15: ALOHA was developed in early

A. 1960

B. 1970

C. 1980

D. 1990

MCQ 16: In star ring topology, the wiring inside the hub makes a

A. Connection

B. Station

C. Ring

D. Signal

MCQ 17: The lower sub layer of the data link layer is responsible for

A. multiple access

B. point to point access

C. error detection

D. flow control

MCQ 18: For Carrier Sense Multiple Access/Collision Detection (CSMA/CD), we need a restriction on the

A. Collision Size

B. Signal Size

C. Frame Size

D. Station Size

MCQ 19: In Interframe Space (IFS), when the channel is idle then it waits for the

A. acknowledgment

B. IFS time

C. time-out

D. R slots

MCQ 20: In (CSMA/CA), if the station finds the channel busy it doesn't restart the

A. Timer

B. Process

C. Sending bits

D. Frame

MCQ 21: In Code Division Multiple Access (CDMA), the chip sequence is made of

A. N elements

B. N+1 elements

C. N+2 elements

D. infinity elements

MCQ 22: When there is no collision in Carrier Sense Multiple Access/Collision Detection (CSMA/CD), the station receives

A. 4 Signals

B. 3 Signals

C. 2 Signals

D. 1 Signals

MCQ 23: When we represent the data in CDMA, if a station is idle then it sends

A. 0

B. -1

C. 1

D. infinity

MCQ 24: In Frequency Division Multiple Access (FDMA), each band is reserved for a specific

A. Signal

B. Station

C. Bandwidth

D. Data

MCQ 25: In Code Division Multiple Access (CDMA), the sequence of the code is called

A. chips

B. sets

C. encoding

D. decoding

MCQ 26: The single cable that is connecting the stations in the bus topology is known as

A. star

B. ring

C. bus

D. token

MCQ 27: In the poll function, when the response is positive then the primary reads the data and returns an

A. waiting frame

B. sending frame

C. receiving frame

D. acknowledgment frame

MCQ 28: A station that is assigned a shorter Interframe Space (SIFS) has a

A. Low Priority

B. No Priority

C. Higher Priority

D. Idle State

MCQ 29: The Carrier Sense Multiple Access/Collision Detection (CSMA/CD) is used to avoid the

A. errors

B. multiple access

C. point to point access

D. collision

MCQ 30: FDMA stands for

A. frequency division multiple access

B. Fast Data Multiple Access

C. Frequency Data Multiple Access

D. Fast Division Multiple Access

MCQ 31: In token passing method, the stations are organized in the logical

A. ring

B. bus

C. star

D. hybrid

MCQ 32: The function that is used whenever the primary device is ready to receive is called

A. poll function

B. select function

C. token-passing

D. channelization

MCQ 33: The protocol that was developed at the University of Hawaii is

A. CSMA/CA

B. CSMA/CD

C. ALOHA

D. FDMA

MCQ 34: The level of energy between sender and receiver is almost same in the

A. Wireless Network

B. Wired Network

C. Wi-Fi Network

D. DSL Network

MCQ 35: In carrier sense multiple access/ collision detection, the signal from second station needs to add a significant amount of

A. Signals

B. Frames

C. Energy

D. Collision

MCQ 36: A station of Carrier Sense Multiple Access/Collision Detection (CSMA/CD) that has a frame to send needs to monitor the

A. Collision Level

B. Signal Level

C. Energy Level

D. Sense Level

MCQ 37: The number of sequences in a Walsh table needs to be

A. N= 2m

B. N= 3m

C. N= 4m

D. N= 6m

MCQ 38: Logical ring topology is designed by

A. HP

B. IBM

C. Dell

D. Apple

MCQ 39: In CSMA/CA, An amount of time divided into slots is known as

A. Contention Procedure

B. Contention Window

C. Contention Signals

D. Contention Energy

MCQ 40: The method in which one channel carries all transmissions simultaneously is

A. TDMA

B. CDMA

C. FDMA

D. CSMA

MCQ 41: In Time Division Multiple Access (TDMA), the stations share the bandwidth of the channel in

A. Time

B. Station

C. Data

D. Signals

MCQ 42: In the logical ring, the successor is the station which is

A. along the station

B. before the station

C. after the station

D. not in the station

MCQ 43: In Chip sequence, if we multiply a sequence by a number, every element in the sequence is multiplied by that element is called

A. inner product of two equal sequences

B. multiplication of a sequence by a vector

C. multiplication of a sequence by a scalar

D. inner product of two different sequences

MCQ 44: The station on a wireless ALOHA network is the maximum of

A. 400 Km

B. 500 Km

C. 600 Km

D. 700 Km

MCQ 45: The frame transmission time in Pure ALOHA is

A. 25/50 kbps

B. 100/1000 kbps

C. 100/150 kbps

D. 200/200 kbps

MCQ 46: The original ALOHA protocol is called

A. simple ALOHA

B. pure ALOHA

C. CSMA

D. FDMA

MCQ 47: When the number of sequence, N=128 then total stations in the network is

A. 100

B. 90

C. 80

D. 70

MCQ 48: The corresponding box of carrier sense multiple access/collision detection can be replaced by one of the

A. nonpersistant process

B. I-persistent process

C. persistent process

D. p-persistent process

MCQ 49: Random access is also called the

A. controlled access

B. channelization

C. authentication

D. contention methods

MCQ 50: The time-out period is equal to the maximum possible propagation delay of

A. Square-trip

B. Round-trip

C. Rectangular-trip

D. Triangle-trip

MCQ 51: In dual ring topology, the second ring is used for

A. failure

B. waiting

C. passing

D. emergencies

MCQ 52: In Carrier Sense Multiple Access/Collision Detection (CSMA/CD), to continue transmission process we use a

A. Loop

B. Station

C. Signal

D. Navigation

MCQ 53: CDMA stands for

A. Carrier Division Multiple Access

B. Code Data Multiple Access

C. Code Division Multiple Access

D. Carrier Data Multiple Access

MCQ 54: When we multiply two different sequences of the chips sequences and add the results, we get

A. infinity

B. zero

C. N

D. N+1

MCQ 55: In Code Division Multiple Access, the orthogonal sequence is unique for each

A. channel

B. token

C. link

D. station

MCQ 56: Walsh table is a two-dimensional table in which the number of rows and columns are

A. same

B. different

C. N

D. zero

MCQ 57: A collision in a wireless network may add additional energy from 5 to

A. 0.25

B. 0.2

C. 0.15

D. 0.1

MCQ 58: The p-persistent method is used if the time slots with a slot duration equal to or greater than the maximum of

A. Collision Time

B. Sense Time

C. Propagation Time

D. Navigation Time

MCQ 59: A pure ALOHA can transmit the 200-bit frames on a shared channel of

A. 100 kbps

B. 150 kbps

C. 200 kbps

D. 250 kbps

MCQ 60: In Carrier Sense Multiple Access/Collision Detection (CSMA/CD), we do not send the entire frame and then look for a

A. Signal

B. Collision

C. Delay

D. Station

MCQ 61: Multiple-access Protocol is divided into

A. two categories

B. three categories

C. four categories

D. five categories

MCQ 62: The p-persistent method uses its back off procedure if the line is

A. Hold

B. busy

C. noisy

D. Faulty

MCQ 63: The number of sequences in a Walsh table i.e. N=

A. 2^{m+1}

B. 2^{m-1}

C. 2^m

D. 0

MCQ 64: During collisions in the wired network, the detecting energy is almost

A. Triple

B. Double

C. Same

D. quadruple

MCQ 65: In token passing method, the station can send data when it receives the

A. data

B. token

C. Both A and B

D. IFS

MCQ 66: The type which improves the efficiency of pure ALOHA is

A. Upper ALOHA

B. Low ALOHA

C. High ALOHA

D. Slotted ALOHA

MCQ 67: In frequency division multiple access, the bandwidth of each channel is shifted by the

A. Duplexer

B. Divider

C. Multiplexer

D. Filtration

MCQ 68: The collision may result in

A. Save Data

B. Retrieve Data

C. Destroyed Data

D. Encrypt Data

MCQ 69: FDMA, TDMA and CDMA are

A. automatic repeat protocol

B. channelization protocols

C. bit oriented protocol

D. None

MCQ 70: If the station has been authorized by other stations then a station can

A. send data

B. receive data

C. acknowledge data

D. wait

MCQ 71: When a station needs to make a reservation before sending data then it is called the

A. channelization

B. token passing method

C. polling method

D. reservation method

MCQ 72: In frequency division multiple access, the data link layer in each station tells its physical layer to make

A. Signal

B. Bandpass signal

C. baseband signal

D. Both B&C

MCQ 73: Fiber Distributed Data Interface (FDDI) and Copper Distributed Data Interface (CDDI) uses

A. physical ring topology

B. dual ring topology

C. bus ring topology

D. star ring topology

Chapter 16

Network Layer: Address Mapping, Error Reporting and Multicasting Multiple Choice Questions

MCQ 1: In Address Resolution Protocol (ARP), a packet is encapsulated directly into a

A. Data link Integer

B. Network Frame

C. Network Station

D. Data link Frame

MCQ 2: The address space of IPv4 is

A. 4294967296

B. 4294965796

C. 4266496296

D. 6294967296

MCQ 3: For multicasting between two noncontiguous multicast routers, we make a multicast

A. Port

B. Frame network

C. Switch

D. Backbone

MCQ 4: An Ethernet multicast physical address is in the range of

A. 01 :00:5E:00:OO:OO to 01:00:5E:7F:FF:FF

B. 2 :00:5E:00:OO:OO to 01:00:5E:7F:FF:FF

C. 3 :00:5E:00:OO:OO to 01:00:5E:7F:FF:FF

D. 4 :00:5E:00:OO:OO to 01:00:5E:7F:FF:FF

MCQ 5: Subnetting is actually

A. Microwave networks

B. Sub division of networks

C. Absolute network

D. linear network

MCQ 6: Packets are called datagrams at the

A. IPv4 layer

B. IPv6 layer

C. Session layer

D. Presentation Layer

MCQ 7: If an Address Resolution Protocol (ARP) request is broadcast, an ARP reply is

A. Universal

B. Unicast

C. Multicast

D. Generated locally

MCQ 8: The Internet Control Message Protocol (ICMP) has the header size of

A. 12 Bytes

B. 10 Bytes

C. 08 Bytes

D. 06 Bytes

MCQ 9: A dynamic routing table is updated

A. Manually

B. Periodically

C. Randomly

D. Automatically

MCQ 10: The Communication at the network layer of the Internet is

A. Connectionless

B. Connection oriented

C. Both A and B

D. None

MCQ 11: The Internet Control Message Protocol (ICMP) is the companion of

A. IP Transmission

B. IP Packet

C. IP Frame

D. IP protocol

MCQ 12: We can use the ping program to find if a host is

A. Alive

B. Dead

C. Responding

D. Both A and C

MCQ 13: A mobile computer can move from one physical network to another, resulting in a change in its

A. Physical Address

B. Logical Address

C. Datatype Address

D. Header Address

MCQ 14: Subnetting increases the value of

A. n+1

B. m

C. n

D. zero

MCQ 15: An IPv4 address is

A. 32 bits long

B. 64 bits long

C. 128 bits long

D. 192 bits long

MCQ 16: The encrypted security payload extension header is new in

A. IPv4

B. IPv5

C. IPv6

D. IP

MCQ 17: The services of Address Resolution Protocol (ARP) can be used in four different

A. Cases

B. Frames

C. Stations

D. Headers

MCQ 18: WANs that do not support physical multicast addressing can use a process called

A. Linking

B. Drilling

C. Tunneling

D. Digging

MCQ 19: IGMP stands for

A. Internet Group Management Package

B. Internet Group Management Path

C. Internet Group Management Protocol

D. Internet Group Management Ping

MCQ 20: In IGMP, a membership report is sent one after the other within a few moments, that too

A. Just Once

B. Twice

C. Three times

D. Four times

MCQ 21: Another protocol that has been modified in version 6 of the TCP/IP protocol suite is

A. TCP/IPv6

B. TCPv6

C. IGMPv6

D. ICMPv6

MCQ 22: The jurisdiction of the physical address is a

A. Local protocol

B. Local Data

C. Local Network

D. Local Header

MCQ 23: When a router cannot route a datagram, the datagram is discarded and sends a message to source i.e.

A. Destination Unreachable

B. Destination unverified

C. Destination Unavailable

D. Destination no-entry

MCQ 24: A host may know its IP address, but it may not know the

A. Corresponding Mask

B. Corresponding Clock

C. Corresponding Protocol

D. Corresponding Data

MCQ 25: The IP is a connectionless

A. Source

B. Protocol

C. Station

D. Destination

MCQ 26: The IP packet that carries an Internet Group Management Protocol (IGMP) packet has a value of

A. 0

B. 1

C. 2

D. -1

MCQ 27: NAT stands for

A. Network Address Translation

B. Network address transmitter

C. Network address table

D. Network Address Transcription

MCQ 28: The number of addresses in the block can be found by using the formula

A. $2^{32} + 3n$

B. $2^{32} + n$

C. $2^{32} - n$

D. $2^{32} - 2n$

MCQ 29: To prevent unnecessary traffic, Internet Group Management Protocol (IGMP) uses a

A. Delayed Response Strategy

B. Delayed Response Stations

C. Delayed Response Solutions

D. Delayed Response Signals

MCQ 30: The Internet Protocol version 4 (IPv4) delivery mechanism is used by

A. IEEE protocols

B. TCP/IP protocols

C. Internet protocols

D. UDP

MCQ 31: A term that can be used to find the multicast addresses supported by an interface is called

A. Netsynthetic Utility

B. Netstat Utility

C. Netsat Utility

D. Netslot Utility

MCQ 32: The IPv4 address is displayed as

A. 4 bits

B. 8 bits

C. 16 bits

D. 32 bits

MCQ 33: In network addresses, destination address field are of

A. 4 bits

B. 8 bits

C. 16-byte

D. 16 bits

MCQ 34: A query message is multicast by using the multicast address, which is

A. 224.0.0.2

B. 224.0.0.4

C. 224.0.0.1

D. 224.0.0.3

MCQ 35: IP was originally designed for

A. Multicast delivery

B. Multilevel cast delivery

C. Unicast delivery

D. Absolute delivery

MCQ 36: Classful addressing is replaced with

A. Subclass addressing

B. Fully occupied addresses

C. Upper-class addressing

D. Classless addressing

MCQ 37: Address Resolution Protocol (ARP) is a

A. 8 Bit Field

B. 10 Bit Field

C. 12 Bit Field

D. 16 Bit Field

MCQ 38: The 14.23.120.8 address lies in which class

A. class A

B. class B

C. class D

D. class E

MCQ 39: An ARP packet when the protocol is IPv4 and the hardware is Ethernet the size would be

A. 4 bytes

B. 8 bytes

C. 16 bytes

D. 28 bytes

MCQ 40: In classful addressing, the address space is divided into

A. five classes

B. ten classes

C. fifteen classes

D. three classes

MCQ 41: Multicast link state routing uses the source-based

A. Root approach

B. Node approach

C. Domain approach

D. Tree approach

MCQ 42: In Address Resolution Protocol (ARP), each LAN has been assigned a

A. Trigger

B. Integer

C. Repeater

D. Process header

MCQ 43: The internetwork is made of five networks, those are

A. three LANs and two WAN

B. four LANs and one MAN

C. four MANS and one WAN

D. four LANs and one WAN

MCQ 44: In ARP services, the sender is a router that receives a datagram destined for a host on

A. Same network

B. Other Network

C. No network

D. Both A and B

MCQ 45: The echo-request and echo-reply messages are designed for

A. Echo Purpose

B. Address Purpose

C. Diagnostic Purpose

D. Synchronization Purpose

MCQ 46: The length of the base header in Extension header type, is fixed to

A. 12 bytes

B. 20 bytes

C. 36 bytes

D. 40 bytes

MCQ 47: The term which is used to create the subnetting effect is

A. Data ARP

B. Frame ARP

C. ProxyARP

D. ProxyIP

MCQ 48: When a router needs to send a packet destined for another network, it must know the

A. Datagram

B. Medium

C. Path Flow

D. IP Address

MCQ 49: A datagram is a variable-length packet consisting of two parts those are

A. Data and socket address

B. IP address and data.

C. Data and destination

D. Header and data.

MCQ 50: ICMP stands for

A. Internet Control Message Protocol

B. Internet Control Message Provider

C. Internet Central Messenger provider

D. Internet central message protocol

MCQ 51: Internet Group Management Protocol (IGMP) operates

A. Logically

B. Dependently

C. Locally

D. Independently

MCQ 52: The administrator may need to create a subnet without changing the whole system to recognize

A. Subnetted Address

B. Supernetted Data

C. Subnetted Link

D. Supernetted link

MCQ 53: IPv4 addresses are

A. Identical

B. Repetitive

C. Unique

D. Always 0

MCQ 54: RPM actually create a shortest path tree

A. Yes

B. NO

C. Depends on situations

D. Depends on conditions

MCQ 55: ICMP always reports error messages to the

A. Shadow/Copied source

B. Pair source

C. Original source

D. Duplicate source

MCQ 56: The addresses of classes A, B and C are

A. Multicast

B. Reserved

C. Unicast

D. All of above

MCQ 57: The general query message does not define a

A. Particular Protocol

B. Particular Data

C. Particular Frame

D. Particular Group

MCQ 58: The number of columns in a routing table required for classless addressing is

A. One column

B. Two columns

C. Three columns

D. Four columns

MCQ 59: A limited lifetime in which datagram can travel through an internet, is known as

A. Lifecycle

B. Time to live

C. Checksum

D. Time of Service

MCQ 60: The addresses in a block must be

A. Random

B. Contiguous

C. Repetitive

D. Oddly arranged

MCQ 61: There are several tools that can be used in the Internet for

A. Packaging

B. Debugging

C. Data Retrieval

D. IP Source Retrieval

MCQ 62: Routing between autonomous systems is referred to as

A. Interdomain routing

B. Intradomain routing

C. Worldwide routing

D. Internetdomain routers

MCQ 63: The loop in the flooding process is eliminated by

A. DVMRP

B. RFC

C. RPF

D. MDVR

MCQ 64: In classful addressing, a large part of the available addresses were

A. Wasted.

B. Reserved

C. Consumed

D. both A and C

MCQ 65: Class C lies between

A. 0 to 127

B. 1128-19111

C. 1192-22311

D. 1240-25511

MCQ 66: The maximum size of an IPv4 packet would be

A. 1024 bytes

B. 2048 bytes

C. 3098 bytes

D. 4064 bytes

MCQ 67: PIM-DM stands for

A. Protocol Independent Multicast-Dense Mode

B. Protocol Independent Multicast-Duplicate Mode

C. Protocol Independent Multicast-Detailed Mode

D. Protocol Independent Multicast-Deline Mode

MCQ 68: A membership report is sent twice i.e. one after the other, In protocol type

A. ICMP

B. IGMP

C. TCP/IP

D. TCP

MCQ 69: In classful addressing the whole address is divided into two parts that are

A. Netid and tation Id

B. Netid and Hostid

C. Netid and tableId

D. Netid and frame Id

MCQ 70: In multicasting, the router may forward the received packet through

A. Only one of its interfaces

B. Several of its interfaces

C. Multi level of its interfaces

D. All of above

MCQ 71: A section in error messages that carries information for finding the original packet that had the error, is

A. Data Frame

B. Data Section

C. Message section

D. Error message segment

MCQ 72: In unicast communication, there is one source and

A. One destination

B. Two destination

C. Many destination

D. No destination

MCQ 73: A host or router can join a group by sending a

A. Initiative Report

B. Joining Report

C. Membership Report Message

D. Membership Leave Report

MCQ 74: A station can find its physical address by checking its interface, but it does not know its

A. Subnetted Address

B. IP Address

C. Physical Address

D. Logical Address

MCQ 75: One of the main responsibilities of Internet Control Message Protocol (ICMP) is to report

A. IP

B. Collisions

C. Queries

D. Errors

MCQ 76: The methods of delivery are

A. Direct Delivery

B. Indirect Delivery

C. Random Delivery

D. Both A and B

MCQ 77: DHCP provides static and dynamic address allocation that can be

A. Manual

B. Automatic

C. Absolute

D. Both A and B

MCQ 78: Internet Group Management Protocol (IGMP), is not a multicasting routing protocol; it is a protocol that manages

A. Group membership

B. Frames

C. Packets

D. Group Source

MCQ 79: Tunneling is a strategy used when two computers are using

A. IPv4

B. IPv6

C. IPv5

D. None of above

MCQ 80: In Address Resolution Protocol (ARP), the station can send its physical address and ask for a

A. Long time lease

B. Lease

C. Short Time Lease

D. Logical Lease

MCQ 81: The Internet Control Message Protocol (ICMP) has been divided in two categories, error-reporting messages and

A. Query Report messages

B. Query messages

C. Query Data

D. Query Frames

MCQ 82: ICMP protocol is used for

A. Error reporting

B. Checksum

C. Flow control

D. None

MCQ 83: ICMP is capable of handling errors of

A. 4 types

B. 5 types

C. 6 types

D. 8 types

MCQ 84: In ICMP, the error-reporting messages report the problems of

A. Router

B. Source

C. Transmission Flow

D. Message Path

MCQ 85: Flooding broadcast packets creates loops in the

A. Systems

B. Domains

C. Group

D. Station

MCQ 86: When a host sees that no process is interested in a specific group, it sends a

A. Logical report

B. Local report

C. Leave report

D. Joining report

MCQ 87: The first address in the block can be found by setting the rightmost 32- n bits to

A. Os.

B. 1s

C. combination of 0 and 1s

D. Null

MCQ 88: The ping program sends messages with sequence numbers starting from

A. -1

B. 1

C. 2

D. 0

MCQ 89: ARP stands for

A. Address Restoring Protocol

B. Address Resolution Protocol

C. Address Reverting Protocol

D. Address Resolving Protocol

MCQ 90: A delayed response strategy prevents unnecessary traffic on a

A. WAN

B. LAN

C. MAN

D. ELAN

MCQ 91: The Dotted-decimal notation of 10000001 00001011 00001011 11101111 would be

A. 193.131.27.255

B. 129.11.11.239

C. 192.168.10.9

D. 172.16.11.3

Chapter 17

Network Layer: Delivery, Forwarding, and Routing Multiple Choice Questions

MCQ 1: The Routing Information Protocol (RIP) cannot have more than 15 hops if infinity is defined as

A. 13

B. 14

C. 15

D. 16

MCQ 2: In Reverse Path Forwarding (RPF), the router receives a packet and extracts the

A. Protocol

B. Source Address

C. Destination Address

D. Data Type

MCQ 3: A routing table for classless addressing has a minimum of

A. 5 Columns

B. 6 Columns

C. 3 Columns

D. 4 Columns

MCQ 4: Each node uses the shortest path tree protocol to construct its

A. Connections

B. Routing table

C. Graphs

D. Network

MCQ 5: In the Border Gateway Protocol (BGP), the criterion of the policy is set by the

A. System

B. User

C. Medium

D. Administrator

MCQ 6: A network can receive a multicast packet from a particular source only through a

A. Designated parent resolver

B. Designated protocol router

C. Designated parent table

D. Designated parent router

MCQ 7: In periodic update, a node sends its routing table normally after every

A. 10s

B. 20s

C. 30s

D. 40s

MCQ 8: To convert broadcasting to multicasting, the protocol uses

A. Three Procedures

B. Two Procedures

C. One Procedure

D. Multi Procedures

MCQ 9: The network layer supervises the handling of the packets by

A. Physical Networks

B. Data Networks

C. Application Networks

D. Transport Networks

MCQ 10: The technique to simplify routing is called the

A. Network Method

B. Error-Control Method

C. Route Method

D. Default Method

MCQ 11: The idea of aggregation is similar to

A. Supernetting

B. Subnetting

C. Datagram

D. Tunneling

MCQ 12: Well-known mandatory attributes of Border Gateway Protocol (BGP) is

A. AS_PATH

B. ORIGIN

C. NEXT_HOP

D. All of above

MCQ 13: In multicast communication, the relationship is

A. One to one

B. One to many

C. Many to one

D. many to many

MCQ 14: In multiple unicasting, the packets are created with a relative delay in

A. Large packet

B. Large networks

C. Large Databits

D. Large nodes

MCQ 15: Reverse Path Forwarding (RPF) does not guarantees that each network receives

A. One Copy

B. Two Copies

C. Three Copies

D. Four Copies

MCQ 16: DVMRP stands for

A. Distance Vector Multicast Range Protocol

B. Distance Vector Multicast Routing Packet

C. Distance Vector Multicast Routing Path

D. Distance Vector Multicast Routing Protocol

MCQ 17: The graft message forces the upstream router to resume sending the

A. Multicast messages

B. Unicast messages

C. Multiple Unicast messages

D. Protocol messages

MCQ 18: The telephone line is an example of

A. Virtual link

B. Stub link

C. Transient link

D. Point-to-point link

MCQ 19: In the shortest path tree, root of a tree is a

A. Station

B. Address

C. Link

D. Node

MCQ 20: In Open Shortest Path First (OSPF) terminology, a connection is called a

A. Node

B. Station

C. Link

D. Backbone

MCQ 21: If the path from A to B is the shortest, then it is also the shortest from

A. A to C

B. A,B to C

C. B to A

D. B to C

MCQ 22: In classless addressing, we need at least

A. Two Columns

B. Three Columns

C. Four Columns

D. Five Columns

MCQ 23: We can create a sense of hierarchy in the routing tables, to solve the problems of

A. Gigantic re-allocate tables

B. Gigantic revolving tables

C. Gigantic routes

D. Gigantic routing tables

MCQ 24: The designated parent router can be the router with the shortest path to the

A. Source

B. Network

C. Destination

D. Router

MCQ 25: In Unicast Routing, the first column in Routing Table defines the

A. Data Address

B. Network Address

C. Routing Address

D. Protocol Address

MCQ 26: In a stub link, the link is

A. Bi-directional

B. One-directional

C. Omni-directional

D. All of above

MCQ 27: If the multicast packet has just came from the hop defined in the table, the packet has traveled the

A. Longest Path

B. Router Path

C. IP Path

D. Shortest Path

MCQ 28: Reverse Path Broadcasting (RPB) guarantees each network receives a copy of the multicast packet without formation of

A. Protocol errors

B. Loops

C. Address errors

D. long strings

MCQ 29: In distance vector routing, each node shares its routing table with its

A. Immediate neighbors

B. Next lane neighbors

C. Distant neighbors

D. First node neighbors

MCQ 30: In path vector routing, the Internet is divided into hierarchical domains called

A. Autonomous networks

B. Autonomous systems

C. Autonomous links

D. Autonomous nodes

MCQ 31: In Unicast Routing, the timer set for periodic dissemination is normally in the range of

A. 60 Min

B. 70 Min

C. 80 Min

D. 90 Min

MCQ 32: In Unicast Routing, link state routing has a different philosophy from that of

A. Distance vector routing

B. Distance variable router

C. Distance vector rotator

D. Distance variable vector

MCQ 33: Multicast Link State Routing is a direct extension of

A. Unicast routing

B. Multicast routing

C. Multiple unicast routing

D. Broadcast routing

MCQ 34: The router sends a prune message to the upstream router so that it can exclude the corresponding

A. Source

B. Protocol

C. Interface

D. Information

MCQ 35: A dynamic routing table is updated periodically by using one of the dynamic routing protocols such as RIP, OSPF, or

A. BGP

B. TCPv6

C. IPv6

D. ICMPv6

MCQ 36: A combination of rules and procedures that lets routers in the internet inform each other of changes, is

A. Routing protocols

B. Routing packets

C. Routing Path

D. Routing Plan

MCQ 37: In Unicast Routing, a node sends its two-column routing table to its neighbors anytime there is a change in its table, is known as

A. Triggered Update

B. Periodic Update

C. Minimum Update

D. Maximum Update

MCQ 38: To alleviate the problem of time needed for searching the table, the term was designed known as

A. Imaging

B. Paging

C. Aggregation

D. Congestion

MCQ 39: Multicast Open Shortest Path First (MOSPF) protocol is an extension of the

A. ISP

B. BGP Protocol

C. RIP Protocol

D. OSPF protocol

MCQ 40: To place the packet in its route to its destination, we use

A. Delayed delivery

B. Urgent Delivery

C. Forwarding

D. Backwarding

MCQ 41: If the destination host is not on the same network as the deliverer, the packet is delivered

A. Randomly

B. Indirectly

C. Lastly

D. Direct

MCQ 42: The final destination of the packet is a host connected to the same physical network as the deliverer in the

A. Direct Delivery

B. Indirect Delivery

C. Urgent Delivery

D. Delayed Delivery

MCQ 43: In shortest path tree method, the tree is a graph of nodes and

A. Nodes of Nodes

B. Links

C. DataBits

D. Packets

MCQ 44: Protocol Independent Multicast-Sparse Mode (PIM-SM) is similar to Core-Based Tree (CBT), but uses Simpler

A. Protocols

B. Paths

C. Procedures

D. Switches

MCQ 45: In Unicast Routing, each node uses the same topology to create a routing table and the routing table for each node is

A. Reflective

B. Constant

C. Unique

D. Identical

MCQ 46: RIP stands for

A. Rotating Information Protocol

B. Routing Information Path

C. Routing Information Packet

D. Routing Information Protocol

MCQ 47: In RIP, to send a packet to one of the three networks at the far left, router R1 needs to deliver the packet to

A. R0

B. R3

C. R-1

D. R2

MCQ 48: In Unicast Routing, the next-node column defines the address of the router to which the packet is to be sent to reach its

A. Station

B. Network

C. Destination

D. Node

MCQ 49: The autonomous system has

A. 64 Networks

B. 32 Networks

C. 16 Networks

D. 8 Networks

MCQ 50: In path vector routing, one node in each autonomous system that acts on behalf of the entire system is the

A. Header node

B. Footer node

C. Speaker node

D. Silent node

MCQ 51: In multicast routing, each involved router needs to construct a shortest path tree for

A. Groups

B. Stations

C. Destination

D. Links

MCQ 52: Protocol Independent Multicast-Dense Mode (PIM-DM) is used in a dense multicast environment, such as a

A. WAN

B. MAN

C. LAN

D. Switches

MCQ 53: In Unicast Routing, a link state packet can carry a large amount of

A. DataBits

B. Links

C. Protocols

D. Information

MCQ 54: The routing technique that uses a source-based tree approach is

A. Unicast distance vector routing

B. Multicast Distance Vector Routing

C. Multicast link state routing

D. Unicast link state routing

MCQ 55: Reverse Path Broadcasting (RPB) guarantees that the packet reaches every

A. System ID

B. Network

C. Source

D. Header

MCQ 56: Geographical Routing is used to decrease the size of

A. Allocating table

B. Addressing Table

C. Routing Table

D. Re-allocate table

MCQ 57: A second technique to reduce the routing table and simplify the searching process is called

A. Network-Specific Method

B. Network-Specific Movement

C. Network-Specific Maintenance

D. Network-Specific Membership

MCQ 58: In Unicast Routing, the protocol that is an implementation of the distance vector protocol is called

A. Border Gateway Protocol

B. Routing Information Protocol

C. Open Shortest Path First

D. Reverse Address Resolution Protocol

MCQ 59: The Routing Information Protocol (RIP) is an intradomain routing protocol used inside an

A. Stable system

B. Autonomous system

C. Reversed system

D. Poison system

MCQ 60: In the updating process of distance vector routing, the new route has distance

A. Zero

B. Minimum

C. Maximum

D. Infinity

MCQ 61: In distance vector routing, sharing of information in the routing table means sharing

A. the whole table

B. only one column

C. Two columns

D. Three columns

MCQ 62: Next-Hop Method is used to reduce the contents of a

A. Content table

B. Rotating Table

C. Routing Table

D. Re-allocate table

MCQ 63: Border Gateway Protocol (BGP) first time appeared in

A. 1989

B. 1979

C. 1969

D. 1959

MCQ 64: In path vector routing, we can divide autonomous systems into

A. One category

B. Two categories

C. Three categories

D. Four categories

MCQ 65: A multihomed AS has more than one connection to other ASs, but it is still only a source for

A. Data sending

B. Data receiving

C. Information

D. Data traffic

MCQ 66: In Multicast Routing Protocol, A message in the data communication can be

A. Unicast

B. Multicast

C. Broadcast

D. All of above

MCQ 67: A small local ISP is an example of

A. Multihomed AS.

B. Stub AS

C. Transit AS.

D. None of the given

MCQ 68: Flooding is the technique of the

A. Multicast distance vector routing

B. Unicast distance vector routing

C. Multicast link state routing

D. Unicast link state routing

MCQ 69: In Unicast Routing, the disadvantage of the distance vector routing is

A. Stability

B. Instability

C. Split horizon

D. Infinite route distance

MCQ 70: In Unicast Routing, we use the shortest path tree method for finding the shortest path of the

A. Frames

B. Nodes

C. Packets

D. Networks

MCQ 71: In distance vector routing, the least-cost route between any two nodes is the route with

A. Minimum cost

B. Zero distance

C. Maximum distance

D. Minimum distance

MCQ 72: LMM stands for

A. Longest Mask Matching

B. Largest Mask Maintenance

C. Loop Mask Matching

D. Longest Mask Method

MCQ 73: A static routing table contains information entered

A. Automatically

B. Manually

C. Directly

D. Indirectly

MCQ 74: OSPF stands for

A. Open Shortest Path File

B. Open Shortest Packet First

C. Open Shortest Path First

D. Open System Path First

MCQ 75: The designated parent router of each network is responsible for holding the membership

A. Address

B. Protocol

C. Source

D. Information

MCQ 76: The router forwards the received packet through only one of its interfaces in

A. Multicast delivery

B. Broadcast delivery

C. Unicast delivery

D. Omnicast delivery

MCQ 77: Protocol Independent Multicast (PIM) has two independent multicast Protocols, those are

A. PIM-DM and PIM-DS

B. PIM-DM and PIM-DR

C. PIM-DM and PIM-DL

D. PIM-DM and PIM-SM

MCQ 78: Reverse Path Forwarding (RPF) is not based on

A. Source Address

B. IP Address

C. Destination Address

D. Protocol Process

MCQ 79: In an autonomous system, we are dealing with routers and

A. Stations

B. Bridges

C. Networks

D. Protocols

MCQ 80: A metric is the cost assigned for passage of a packet through a

A. Network

B. Protocol

C. Group Tree

D. Router

MCQ 81: In Unicast Routing, triggered updating process, when a node detects some failure in the neighboring links which results in a distance change to

A. Maximum value

B. Minimum value

C. Infinity

D. Zero

MCQ 82: The Core-Based Tree (CBT) is a

A. Group Routing Tree

B. Group Shared Tree

C. Group Formed Tree

D. Group Protocol Tree

MCQ 83: In broadcast communication, the relationship between the source and the destination is

A. One to all

B. Many to one

C. One to many

D. One to one

MCQ 84: In Core-Based Tree (CBT), if a router wants to leave the group then it sends a leave message to its

A. Downstream Router

B. Router Path

C. Upstream Router

D. Stable Router

MCQ 85: Reverse Path Forwarding (RPF) eliminates the loop in the

A. Flooding Process

B. Formation Process

C. Protocol Process

D. Unicast Vector Process

MCQ 86: CBT stands for

A. Core-Based Transmission

B. Core-Based Tree

C. Core-Based Tracer

D. Core-Based Target

MCQ 87: Good examples of transit Autonomous Systems are national and international

A. ISP

B. BGP

C. RIP

D. NIP

MCQ 88: In Unicast Routing, to avoid two-node instability we can use split horizon strategy combined with

A. Poison reverse

B. Poison Stability

C. Poison strategy

D. Poison forward

MCQ 89: Techniques can make the size of the routing table manageable and also handle issues such as

A. Flow control

B. Error reporting

C. Tunneling

D. Security

MCQ 90: Protocol Independent Multicast-Sparse Mode (PIM-SM) is used when there is a slight possibility that each router is involved in

A. Unicasting

B. Protocol

C. Group Sharing

D. Multicasting

MCQ 91: Protocol Independent Multicast-Sparse Mode (PIM-SM) is used in sparse multicast environment such as

A. WAN

B. MAN

C. LAN

D. Switches

MCQ 92: BGP stands for

A. Border Gateway Packet

B. Border Gateway Protocol

C. Border Gateway Path

D. Border Gateway Plan

MCQ 93: In Multicast Routing Protocol, the teleconferencing is the application of

A. Multicast

B. Multiple unicast

C. Broadcast

D. Unicast

MCQ 94: Multicasting is more efficient than

A. Unicast

B. Multilevel-cast

C. multi unicast

D. Broadcast

MCQ 95: When the source and destination of the packet are located on the same physical network, then

A. Direct delivery Fails

B. Direct delivery Delay

C. Direct delivery Occurs

D. Direct delivery Stops

MCQ 96: In Unicast Routing, If the instability is between three nodes, stability cannot be

A. Stabilized

B. Reversed

C. Guaranteed

D. Minimized

MCQ 97: In Unicast Routing, the Dijkstra algorithm creates a shortest path tree from a

A. Graph

B. Chart

C. Station

D. Link

MCQ 98: In Multicast Routing Protocol, flooding is used to broadcast the packets but it creates

A. Gaps

B. loops

C. Errors

D. long strings

MCQ 99: RPF stands for

A. Reverse Path Forwarding

B. Reverse Path Failure

C. Reverse Packet Forwarding

D. Reverse Protocol Failure

MCQ 100: LSP stands for

A. Link Stable Packet

B. Link State Packet

C. Link State Protocol

D. Link Status Path

MCQ 101: An Autonomous System (AS) is a group of networks and routers under the authority of a single

A. Membership

B. Ownership

C. Administration

D. Management

MCQ 102: In Longest Mask Matching, three entries are 127, 126, 124, the first entry should be

A. 124

B. 126

C. 127

D. 127 and 124

MCQ 103: Border Gateway Protocol (BGP) is an interdomain routing protocol using

A. Path routing table

B. Routing Information Protocol

C. Distance vector routing

D. Path vector routing

MCQ 104: For multicasting between two noncontiguous multicast routers, we make a multicast backbone (MBONE) to enable

A. Drilling

B. Digging

C. Tunneling

D. Stabling

MCQ 105: Host-specific routing is used for purposes such as checking the route or providing

A. Network Measures

B. Security Measures

C. Routing Measures

D. Delivery Measures

MCQ 106: A stub link is a network that is connected to

A. One router

B. Two routers

C. Three routers

D. Four routers

MCQ 107: In multicast routing, when a router receives a packet to forward, it needs to find the shortest path to the

A. Sender

B. Destination

C. Medium

D. First Node

MCQ 108: In Core-Based Tree (CBT), when the router has received all join messages, then the tree will be

A. Indexed

B. Framed

C. Stabilized

D. Formed

MCQ 109: In Unicast Routing, the size of the network in the distance vector routing can not exceed

A. 2 hops

B. 5 hops

C. 10 hops

D. 15 hops

MCQ 110: Reverse Path Multicasting (RPM) is used to increase

A. Creativity

B. Availability

C. Efficiency

D. Strength

Chapter 18

Network Layer: Internet Protocol Multiple Choice Questions

MCQ 1: In the version field of IPv4 header, when the machine is using some other version of IPv4 then the datagram is

A. Discarded

B. Accepted

C. Interpreted

D. Interpreted incorrectly

MCQ 2: The network layer at the source is responsible for creating a packet from the data coming from another

A. Station

B. Link

C. Node

D. Protocol

MCQ 3: The header of the datagram in the IPv4 has

A. 0 to 20 bytes

B. 20 to 40 bytes

C. 20 to 60 bytes

D. 20 to 80 bytes

MCQ 4: In the IPv4 layer, the datagram is of

A. Fixed length

B. Variable length

C. Global length

D. 0 length

MCQ 5: In IPv4, the service type of the service in the header field, the first 3 bits are called

A. Type of service

B. Code bits

C. Sync bits

D. Precedence bits

MCQ 6: An IPv4 datagram can encapsulate data from several higher-level protocols such as UDP, ICMP, IGMP and

A. TCP

B. CDM protocols

C. ATM protocols

D. IEEE protocols

MCQ 7: To record the Internet routers of IPv4 that handles the datagram is responsibility of

A. Record protocol

B. Record Data

C. Record Route

D. Record Header

MCQ 8: When the source needs to pass information to all routers visited by the datagram, option used in

A. Hop-by-Hop Option

B. Loop-by-loop Option

C. IP-by-IP option

D. Header-by-Header option

MCQ 9: The Internet has chosen the datagram approach to switching in the

A. Data Link Layer

B. Network Layer

C. Physical Layer

D. Presentation Layer

MCQ 10: in IPv4 datagram, padding is added if the size of a datagram is less than

A. 46 Bytes

B. 45 Bytes

C. 50 Bytes

D. 48 Bytes

MCQ 11: In IPv4, the only thing encapsulated in a frame is

A. Unit

B. Data Frame

C. Datagram

D. Addresses

MCQ 12: In Internetwork, network layer is responsible for

A. Host to User Link

B. Host to Host Delivery

C. User to Host IP

D. Host to Server communication

MCQ 13: In IPv4 protocol, each datagram is handled

A. Independently

B. dependently

C. Priority basis

D. Systematically

MCQ 14: CCT stands for

A. Close Circuit Transmission

B. Congestion Controlled Traffic

C. Congestion Controlled Transmission

D. Close Circuit Traffic

MCQ 15: In IPv4, fragmented datagram's fragment size should have the first byte number divisible by

A. 2

B. 4

C. 8

D. 16

MCQ 16: IPv6 is designed to allow the extension of the

A. Protocol

B. DataSet

C. Headers

D. Routes

MCQ 17: The total length of the IPv4 datagram is limited to 65,535 (2^{16} - 1) bytes, the field length is

A. 10 Bits

B. 12 Bits

C. 14 Bits

D. 16 Bits

MCQ 18: In IPv6, the base header can be followed by, up to

A. Six Extension Layers

B. Six Extension Headers

C. Eight Extension headers

D. Eight Extension layers

MCQ 19: When HEADER LENGTH field of the IPv4 header is at its maximum size, the value of the field will be

A. 5

B. 15

C. 20

D. 60

MCQ 20: The flag field that does fragmentation of IPv4 segment is the

A. 1 bit field

B. 2 bit field

C. 3 bit field

D. 4 bit field

MCQ 21: In an IPv6 datagram, the M bit is 0, the value of HLEN is 5, the value of total length is 200 and the offset value is

A. 400

B. 350

C. 300

D. 200

MCQ 22: In IPv4, the code point subfield can be used in

A. 2 different ways

B. 2 samilar Stations

C. 2 similar activities

D. Same format

MCQ 23: In IPv4, a machine drops the header and trailer, when it receives a

A. Signal

B. Frame

C. Service

D. Request

MCQ 24: A sender can choose a route so that its datagram does not travel through

A. Competitor's Network

B. Stations

C. Backbone Link

D. Competitor's Router

MCQ 25: In fragmentation of IPv4, the 13-bit field that shows the relative position of the fragment with respect to the whole datagram is called

A. Identification field

B. flag field

C. Fragmentation offset field

D. None of the given

MCQ 26: An option that is used by the source to predetermine a route for the datagram as it travels through the Internet is known as

A. Strict Source

B. Strict Source Header

C. Strict Source Route

D. Strict Source Data

MCQ 27: The router discards the datagram when it is decremented to

A. Negative values

B. Positive values

C. Zero

D. One

MCQ 28: Datagram network uses the universal addresses defined in the network layer to route packets from the source to the

A. Same source

B. Layers

C. Destination

D. Application

MCQ 29: In IPv4, some physical networks are not able to encapsulate a datagram of

A. 65,555 bytes

B. 65,545 bytes

C. 65,535 bytes

D. 65,525 bytes

MCQ 30: Physical and data link layers of a network operate

A. Independently

B. Locally

C. Separately

D. Unjointly

MCQ 31: In an IPv4 packet, the value of HLEN is

A. 7

B. 6

C. 5

D. 4

MCQ 32: A sequence of packets with same source and destination addresses can be sent one after another when the connection is

A. Bypassed

B. Switched

C. Established

D. Linked

MCQ 33: The responsibility of Physical and data link layers on the network is

A. Data Delivery

B. Data Flow

C. Data Sync

D. All of above

MCQ 34: The network layer was designed to solve the problem of delivery through

A. Single Link

B. Multilevel Link

C. Several Link

D. Unicast Link

MCQ 35: In IPv4, the 4-bit field that defines the total length of the datagram header in 4-byte words is the

A. Version field

B. Header length field

C. Service field

D. Service type field

MCQ 36: In IPv4, formula for Length of data =

A. Length + header

B. Total length - header length

C. total length - footer length

D. length + footer

MCQ 37: If the IPv4 address is not listed in the datagram, a router must not be

A. Rechecked

B. Synchronized

C. Identified

D. Visited

MCQ 38: By extracting the 32 rightmost bits from the mapped address, we can Convert

A. IPv6 address to IPv4

B. IPv4 address to IPv6

C. IPv4 mapped address

D. None of above

MCQ 39: In IPv6, another example of Congestion-Controlled Traffic is

A. TCP

B. ICMP

C. IPv4

D. UDP

MCQ 40: In the strict source route, the sender can choose a route with a specific type of

A. Quality

B. Service

C. Data

D. Path

MCQ 41: The bytes in the original datagram of IPv4 are numbered

A. 0 to 2999

B. 0 to 3999

C. 0 to 4999

D. 0 to 5999

MCQ 42: In IPv4, the value of the Maximum Transfer Unit (MTU) depends on the

A. Physical network protocol

B. DataLink network protocol

C. UD protocol

D. Transport network protocol

MCQ 43: In IPv6, the flow label is assigned to a packet by the

A. Co-host

B. Source-host

C. Host

D. Medium link

MCQ 44: In the IPv4 layer, the datagrams are the

A. Frames

B. Addresses

C. Protocol

D. Packets

MCQ 45: IPng stands for

A. Internetworking Protocol, next gate

B. Internetworking Protocol, next generation

C. International Protocol, next generation

D. International Protocol, next gate

MCQ 46: In IPv6, each packet is composed of a mandatory base header followed by the

A. Data Header

B. Payload

C. Off load

D. Type

MCQ 47: In internetwork, the frames does not carry any

A. Flow

B. Error

C. Links

D. Information

MCQ 48: To combines the concepts of the strict source route and the loose source route options of IPv4 we use

A. Source Extension

B. Source Headers

C. Source Routing

D. Source host

MCQ 49: A connectionless communication of the Internet is established at

A. Data Link Layer

B. Network Layer

C. Physical Layer

D. Transport Layer

MCQ 50: The size of the IPv4 datagram may increase, as the underlying technologies allows

A. Greater bandwidth

B. Fixed bandwidth

C. Reserved bandwidth

D. Greater Header

MCQ 51: In IPv6, real-time audio or video, particularly in digital form, requires resources such as

A. Fixed Bandwidth

B. Variable Bandwidth

C. High Bandwidth

D. Low Bandwidth

MCQ 52: To enhance reliability, IPv4 must be paired with a reliable protocol such as

A. TCP/IP

B. UDP

C. TCP

D. IEEE protocols

MCQ 53: IPv4 protocol carries data from different

A. Stations

B. Nodes

C. Protocols

D. Datagram

MCQ 54: The field that remains unchanged during the time the IPv4 datagram travels from the source host to the destination host is

A. Destination address

B. Source Address

C. both A and B

D. None of above

MCQ 55: In IPv4, the subfield of precedence was part of version

A. 4

B. 5

C. 6

D. 7

MCQ 56: In IPv6, the type of traffic that expects minimum delay is

A. Controlled Transmission

B. Congestion Controlled Traffic

C. Close Traffic

D. Non-Congestion Traffic

MCQ 57: The packet is fragmented in the network layer, if the packet is

A. Too Small

B. Too Large

C. Too busy

D. Null

MCQ 58: In the IPv4, the value 0100 of the type of service bits are used to represent the

A. Maximize reliability

B. Minimize delay

C. Maximize throughput

D. Minimize cost

MCQ 59: In IPv6, the format and the length of the IP address were changed along with the

A. Frame format

B. Packet alignment

C. Frame bits

D. Packet Format

MCQ 60: In Congestion Controlled Traffic, it is understood that packets may arrive

A. On Time

B. Before time

C. Delayed

D. Both A and B

MCQ 61: The header of IPv4 datagram is made of

A. One Part

B. Two Parts

C. Three parts

D. Four parts

MCQ 62: Ethernet protocol has a minimum and maximum restriction on the size of data that can be encapsulated in a frame is

A. 45 to 1200 Bytes

B. 45 to 1400 Bytes

C. 45 to 1450 Bytes

D. 45 to 1500 Bytes

MCQ 63: In IPv4 protocol, the size of the source and destination address is

A. 64 Bit

B. 16 Bit

C. 128 bits long

D. 32 Bit

MCQ 64: When the IPv4 protocol sends a datagram, it copies the current value of the counter to the identification field and increments the counter by

A. 1

B. 0

C. -1

D. 2

MCQ 65: Connection-oriented protocols is used in virtual circuit approach for packet switching, such as in

A. Frame Relay

B. FSK

C. ATM

D. both A and C

MCQ 66: While transmission of packets over Internet, when all the packets have been delivered, the connection is

A. Static

B. Established

C. Terminated

D. On-Pause

MCQ 67: In IPv6, the header checksum is eliminated because the checksum is provided by

A. Lower Layer

B. Session layer

C. Upper Layer

D. All of above

MCQ 68: In IPv4, parts of the header must be copied by all fragments, if the datagram is

A. Swapped

B. Copied

C. Fragmented

D. Transferred

MCQ 69: In connection-oriented protocols, a sequence of packets are sent on same path in

A. Random order

B. Sequential Order

C. No Specific order

D. According to priority

MCQ 70: All routers may use universal time, their local clocks may not be

A. Authorized

B. Digitized

C. Synchronized

D. Verified

MCQ 71: The initial value of checksum is

A. -1

B. 2

C. 1

D. 0

MCQ 72: RTP stands for

A. Real Time Protocol

B. Real Time Packet

C. Real Transmission Protocol

D. Real Transmission Packet

MCQ 73: Switching can be divided into three broad categories: circuit switching, packet switching and

A. Data Switching

B. IP Switching

C. Message Switching

D. Frame Switching

MCQ 74: An option which is used to record the time of datagram processing by a router is called

A. Timestamp

B. Time frame

C. Time delay

D. Timewrap

MCQ 75: In IPv4, a record route can list up to

A. 11 Router Addresses

B. 12 Router Addresses

C. 13 Router Addresses

D. 14 Router Addresses

MCQ 76: IPv6 has the large address

A. Protocol

B. Link

C. Space

D. Stations

MCQ 77: Three strategies used to handle the transition from version 4 to version 6 are dual stack, tunneling and

A. Header Switching

B. Header Translation

C. Header transfer

D. Header Transmission

MCQ 78: In internetwork, the network layer at the destination is responsible for

A. Address Authentication

B. Address Node

C. Address format

D. Address Verification

MCQ 79: The total length field defines the total length of the datagram including the

A. Length

B. Data Length

C. Header

D. Footer

MCQ 80: MTU stands for

A. Minimum Transfer Unit

B. Maximum Transfer Unit

C. Maximum Transport Unit

D. Maximum Transmission Unit

MCQ 81: The header of the IPv4 packet changes with each

A. Visited Data

B. Visited Address

C. Visited Router

D. Visited Header

MCQ 82: In IPv4, If we use a protocol with Maximum Transfer Unit (MTU), it makes the transmission more

A. Difficult

B. Efficient

C. Slow

D. Effective

MCQ 83: A term that has a limited lifetime in its travel through an internet is called

A. Message

B. Datagram

C. Servers

D. Protocols

MCQ 84: If a host does not support the flow label, it sets the flow label field to

A. One

B. Two

C. Three

D. Zero

MCQ 85: Internet is also known as

A. Datagram Network

B. Datagram Link

C. Datagram Nodes

D. Datagram Internet

MCQ 86: When two computers using IPv6 want to communicate with each other, the strategy is used known as

A. Tunneling

B. Drilling

C. Packaging

D. Curving

MCQ 87: The value of the checksum must be recalculated regardless of

A. De-fragmentation

B. Fragmentation

C. Transfer

D. Size

MCQ 88: A sequence of packets with same source and destination addresses can be sent one after another, shows the

A. Relationship between Packets

B. Independency of packets

C. Origin of the Packets

D. All of above

MCQ 89: Another option which is similar to the strict source route is

A. Light Source Route

B. Basic Source Route

C. Loose Source Route

D. Linear Source Route

MCQ 90: The first fragment has an offset field value of

A. 10

B. 5

C. 2

D. 0

MCQ 91: In connectionless service, the network layer protocol treats each packet

A. As a switch

B. Independent of other packet

C. Dependent to other packet

D. Locally

MCQ 92: In IPv6, the base header has the

A. 10 Fields

B. 09 Fields

C. 08 Fields

D. 07 Fields

MCQ 93: In IPv4, the checksum covers only the

A. Header

B. Layers

C. Datagrams

D. Fragmentation

MCQ 94: The Encrypted Security Payload (ESP) is an extension that provides

A. Stability

B. Availability

C. Reliability

D. Confidentiality

MCQ 95: The datagram field is to intentionally limit the journey of the

A. Frames

B. Packet

C. IP

D. All of above

MCQ 96: In packet format, the base header occupies

A. 55 Bytes

B. 50 Bytes

C. 45 Bytes

D. 40 Bytes

MCQ 97: In its simplest form, a flow label can be used to speed up the processing of a packet by a

A. Packet Switch

B. Router

C. Data Switch

D. Protocol

MCQ 98: The source first makes a connection with the destination before sending a packet in

A. Connection-oriented service

B. Connectionless service

C. Unguided Connection

D. All of above

Chapter 19

Network Layer: Logical Addressing Multiple Choice Questions

MCQ 1: A system with 8-bit addresses has address space of

A. 32

B. 256

C. 720

D. 65535

MCQ 2: A link local address of the local addresses is used in an

A. Isolated router

B. Subnets

C. Isolated subnet

D. Supernets

MCQ 3: In classless addressing, there are no classes but the addresses are still granted in

A. Sections

B. Blocks

C. Codes

D. All of above

MCQ 4: In IPv4 Addresses, classful addressing is replaced with

A. Classless Addressing

B. Classful Addressing new version

C. Classful Advertising

D. Classless Advertising

MCQ 5: The address FE80::12 is a

A. link local address

B. site local address

C. multicast address

D. loop back address

MCQ 6: The first address in a block is used as the network address that represents the

A. Class Network

B. Entity

C. Organization

D. DataCodes

MCQ 7: An IPv6 address is

A. 8 bits long

B. 16 bits long

C. 32 bits long

D. 128 bits long.

MCQ 8: In classful addressing, a large part of the available addresses are

A. Dispersed

B. Blocked

C. Wasted

D. Reserved

MCQ 9: Network addresses are the very important concepts of

A. Routing

B. Mask

C. IP Addressing

D. Classless Addressing

MCQ 10: In the subcategories of reserved address in the IPv6, the address that is used by a host to test itself without going into the network is called

A. Unspecified address

B. Loopback address

C. Compatible address

D. Mapped address

MCQ 11: In IPv4 Addresses, each block in classful addressing has the fixed number of

A. Block

B. Cells

C. Binary Codes

D. Size

MCQ 12: In classful addressing, an IP address in class A, B, or C is divided into

A. Netid and Hostid

B. Router ID

C. Block ID

D. None of above

MCQ 13: The dotted-decimal notation is used to make an IPv4 address more compact and easier to

A. Communication

B. Understand

C. Read

D. none of the given

MCQ 14: A few leftmost bits in each address of the IPv6 address define its category,is known as

A. Prefix type

B. Postfix type

C. Reserved type

D. Local type

MCQ 15: In IPv4, two devices on the Internet can never have the

A. Different address

B. Same address

C. Unknown address

D. Fixed address

MCQ 16: The term that enables a user to have a large set of addresses internally and one address externally is called

A. Network Address Translation

B. Network Address Table

C. Subnetting

D. Classnet

MCQ 17: All the outgoing packets go through NAT router, which replaces the source address in the packet with

A. Destination address

B. Global NAT address

C. Local NAT address

D. Absolute NAT address

MCQ 18: In IPv6 addresses, the addresses start with eight 0s are called

A. Unicast addresses

B. Multicast addresses

C. Anycast addresses

D. Reserved addresses

MCQ 19: To represent the IPv4 address, there are

A. two notations

B. three notations

C. four notations

D. five notations

MCQ 20: In classless addressing the size of the block, varies based on the nature and size of the

A. Routers

B. Mask

C. Entity

D. Data

MCQ 21: Each number in dotted-decimal notation is a value ranging from

A. 0 to 32

B. 0 to 255

C. 0 to 525

D. 0 to 680

MCQ 22: An IPv4 address uniquely and universally defines the connection of a device to the

A. Media

B. Internet

C. Monitoring devices

D. User

MCQ 23: IPv6 has the address space of

A. 2^{32}

B. 2^{48}

C. 2^{128}

D. 2^{256}

MCQ 24: In IPv6 Addresses, the field of the prefixes for provider-based unicast address that defines the identity of the node connected to a subnet is called

A. Subnet identifier

B. Provider identifier

C. Subscriber Identifier

D. Node identifier

MCQ 25: The router of the Network Address Translation (NAT) that connects the network to the global address uses

A. only global address

B. only private address

C. only local address

D. one private address and one global address

MCQ 26: A unicast address of the IPv6 defines a

A. Single computer

B. Single network

C. Single Station

D. None of the given

MCQ 27: In IPv6 anycast address, a packet destined is delivered to the

A. Last one

B. Oldest one

C. Nearest one

D. Newest one

MCQ 28: In the multicast address of the IPv6, a transient group address, is used

A. Permanently

B. Globally

C. Temporarily

D. Locally

MCQ 29: Using the form of abbreviation in IPv6 address, 3210 can be written as

A. 321

B. Cannot be abbreviated

C. 32

D. 3021

MCQ 30: In multicast address of IPv6, the value of the prefix is

A. 11111111

B. 11110000

C. 10101010

D. 1111

MCQ 31: IPv6 has a larger address space of

A. 2*16

B. 2*128

C. 2*32

D. 2*8

MCQ 32: In IPv4 Addresses, a telephone network has three levels of

A. Codes

B. Hierarchy

C. Ownership

D. Ips

MCQ 33: In the Network Address Translation (NAT), all the outgoing packets go through

A. Global router

B. Local router

C. NAT router

D. Private router

MCQ 34: ICANN stands for

A. Internet Corporation for Assigned Names and Addresses

B. International Corporation for Assigned Names and Addresses

C. Internet Cells for Assigning Names and Addresses

D. Internet Corporation for Assigning Nodes and Addresses

MCQ 35: In IPv4 Addresses, organizational networks are connected to the Internet via a

A. Mask

B. Router

C. Bridge

D. BUS

MCQ 36: In classful addressing, the smaller networks are called

A. Supernet

B. linear net

C. Subnet

D. Multinet

MCQ 37: Multicast addresses in Ipv6 starts with

A. 1111

B. 11110000

C. 11111111

D. 0

MCQ 38: In using One IP address for the Network Address Translation, then the translation table has

A. one column

B. two columns

C. three columns

D. four columns

MCQ 39: In classful addressing, the number of blocks in Class D is

A. 2

B. 1

C. 4

D. 6

MCQ 40: In IPv4 Addresses, every Network Address Translation router has a

A. Mask address

B. NAT address

C. Router table

D. translation table

MCQ 41: An IPv4 address is a

A. 8 bit address

B. 16 bit address

C. 32bit address

D. 48 bit address

MCQ 42: In IPv6 Addresses, the 5-bit field in the prefixes for provider-based unicast address indicates the agency that has registered the address is

A. Type identifier

B. Registry identifier

C. Provider identifier

D. Subscriber Identifier

MCQ 43: 252.5.15.111 address lies in class

A. Class A

B. Class B

C. Class D

D. Class E

MCQ 44: In IP addresses, the third-level of hierarchy is

A. Subnetting

B. No Subnetting

C. Supernetting

D. IP mask

MCQ 45: Network Address Translation (NAT) is used mostly by

A. DSLs

B. ADSL

C. ISPs

D. IPs

MCQ 46: An IPv6 address of the Internet consists of

A. 16 bytes

B. 12 bytes

C. 32 bytes

D. 48 bytes

MCQ 47: Internet Corporation for Assigned Names and Addresses (ICANN) does not normally allocate addresses to

A. Large organizations

B. Corporate organizations

C. Individual organizations

D. Small organizations

MCQ 48: The structure of classless addressing does not restrict the number of

A. Hierarchical Loop

B. Hierarchical Entities

C. Hierarchical Links

D. Hierarchical Level

MCQ 49: In classful addressing, the length of netid and hostid is predetermined, we can use it as

A. IP Code

B. Mask

C. Unicode

D. Numeric Id code

MCQ 50: In IPv4 Addresses, classless addressing is used to

A. Overcome Address Depreciation

B. Overcome Address Deployment

C. Overcome Address Depletion

D. Overcome Address Storage

MCQ 51: In IPv4 addressing, a block of addresses can be defined as

A. f.g.h.i.tln

B. c.d.e.f.tln

C. a.b.c.tln

D. x.y.z.tln

MCQ 52: In NAT, the range of addresses for private networks from 10.0.0.0 to 10.255.255.255 makes a total of

A. 2^{24}

B. 2^{25}

C. 2^{26}

D. 2^{28}

MCQ 53: The first 3 codes in IPv4 Addresses, the telephone networks defines the

A. IP code

B. Local Code

C. Area Code

D. Block Code

MCQ 54: There are two types of the address that are defined for the

A. Local addresses

B. Reserved addresses

C. Unicast addresses

D. Multicast addresses

MCQ 55: The Internet authorities have reserved three sets of addresses as

A. masknet addresses

B. IP addresses

C. private addresses

D. public addresses

MCQ 56: In IPv4 Addresses, the reserved addresses of the Internet are unique

A. Globally

B. Locally

C. Regionally

D. None of above

MCQ 57: In hexadecimal colon notation, the address consists of 32 hexadecimal digits with every four digits separated by a

A. dot

B. semicolon

C. coma

D. colon

MCQ 58: The value 0000001 of the prefix of the IPv6 address shows the type of

A. Multicast address

B. Unicast address

C. Reserved

D. ISO network addresses

MCQ 59: The class of the IP addresses 208.34.54.12 will be

A. Class A

B. Class B

C. Class C

D. Class E

MCQ 60: The address space of IPv4 is

A. more than 1 billion

B. more than 2 billions

C. more than 3 billions

D. more than 4 billions

MCQ 61: IPv6 addresses use

A. Hexadecimal colon notation

B. Binary notation

C. Dotted decimal notation

D. None of above

MCQ 62: In the old time, a user was connected to the Internet with a

A. ISP

B. ADSL

C. DSL

D. dial up line

MCQ 63: In classful addressing, several networks are combined to create a

A. Classnet

B. Internet

C. Subnet

D. Supernet

MCQ 64: In IPv6 Addresses, to make addresses more readable, IPv6 specifies

A. Octal decimal notation

B. Hexadecimal colon notation

C. Dotted binary notation

D. Dotted decimal notation

MCQ 65: CIDR stands for

A. Class Interdomain Routing

B. Classful Interdomain Routing

C. Classless Information Routing

D. Classless Interdomain Routing

MCQ 66: In Type Identifier of Unicast address, the 3 bit-field defines the address as

A. Provider-base.d address.

B. Provider-base.a address.

C. Provider-base.h address.

D. Provider-base.e address.

MCQ 67: The IPv4 addressing is also called the classful addressing because it uses the concept of

A. Classes

B. Segments

C. Chips

D. Both B and C

MCQ 68: In network addresses, each router has two

A. Addresses

B. Masks

C. Blocks

D. Segments

MCQ 69: Internet addresses are usually written in

A. binary notation

B. dotted hexa notation

C. octant notation

D. dotted decimal notation

MCQ 70: In IPv6 Addresses, the leading zeros of a section can be omitted in the

A. Hexadecimal colon notation

B. Binary notation

C. Dotted decimal IPv6 notation

D. Abbreviated IPv6 addresses

MCQ 71: In the IP networks all prefixes are

A. Different

B. Common

C. 0s

D. Null

MCQ 72: The masks in slash notation of 255.255.255.0 would be

A. /8

B. /24

C. /32

D. /36

MCQ 73: In multicast address of IPv6, the third field defines the

A. Group address

B. Prefix

C. Global address

D. Scope

MCQ 74: Unicast, any cast and multicast are addresses of

A. Ipv4

B. IPv6

C. Both

D. None

MCQ 75: The private network in the NAT is transparent to the rest of the

A. Stations

B. Blocks

C. Internet

D. All of above

Chapter 20

Network Management: SNMP Multiple Choice Questions

MCQ 1: An application-level protocol in which a few manager stations control a set of agents, known as

A. HTML

B. TCP

C. SNMP

D. SNMP/IP

MCQ 2: The full duplex mode increases the capacity of each domain from

A. 10 to 20 mbps

B. 20 to 30 mbps

C. 30 to 40 mbps

D. 40 to 50 mbps

MCQ 3: The Configuration management can be divided into two subsystems which are

A. Reconfiguration and documentation

B. Management and configuration

C. Documentation and dialing up

D. both a and c

MCQ 4: To use Simple Network Management System (SNMP), we need

A. Entities

B. Standard types

C. Frames

D. Rules

MCQ 5: The main difference between SNMPv3 and SNMPv2 is the

A. management

B. integration

C. classification

D. enhanced security

MCQ 6: Networks that are made up of hundreds and sometimes thousands of components are known as

A. Complex Networks

B. Hybrid Networks

C. Component Networks

D. All of above

MCQ 7: The Performance management, is closely related to

A. Risk Management

B. Fault management

C. Security Management

D. Configuration management

MCQ 8: Configuration management can be divided into two subsystems: reconfiguration and

A. Documentation

B. Security

C. Accounting

D. Performance

MCQ 9: Simple Network Management Protocol (SNMP), defines eight types of

A. Protocols

B. Domains

C. Packets

D. Paths

MCQ 10: A management station, called a manager, is a host that runs the

A. SNMP client program

B. SNMP client post

C. SNMP Server program

D. SNMP Server protocol

MCQ 11: Based on the predefined policy of Network management, controlling access to the network is the task of

A. Fault Management

B. Performance Management

C. Active Management

D. Security Management

MCQ 12: BER stands for

A. Basic Encoding Rules

B. Basic Encoding Resolver

C. Basic Encoding Rotator

D. Basic Encoding Router

MCQ 13: The control of users, access to network resources through charges are the main responsibilities of

A. Reactive Management

B. Configuration Management

C. Accounting Management

D. Security Management

MCQ 14: SNMP is a framework for managing devices in an internet using the

A. TCP/IP protocol

B. UDP

C. SMTP

D. CCnP

MCQ 15: Structure of Management Information (SMI), is the guideline of

A. HTTP

B. SNMP

C. URL

D. MIB

MCQ 16: In Network Management System, maps track each piece of hardware and its connection to the

A. IP Server

B. Domain

C. Network

D. Data

MCQ 17: The MIB is a collection of groups of objects that can be managed by

A. SMTP

B. UDP

C. SNMP

D. TCP/IP

MCQ 18: An agent contributes to the management process by warning the manager of an

A. unusual situation

B. unusual station

C. unusual database

D. unusual Protocol

MCQ 19: A network management system can be divided into

A. three categories

B. five broad categories

C. seven broad categories

D. eight broad categories

MCQ 20: Hardware documentation normally involves two sets of

A. Reconciliation

B. Documentation

C. Restoration

D. Reconfiguration

MCQ 21: SNMP provides a set of fundamental operations for monitoring and maintaining a

A. TCP protocol suite

B. DataSet protocol

C. Internet

D. HTML suite

MCQ 22: The main difference between SNMPv3 and SNMPv2 is the

A. Low Security

B. No Security

C. High Security

D. Enhanced Security

MCQ 23: The Simple Network Management Protocol (SNMP), uses the concept of manager and

A. Host

B. Server

C. Agent

D. Query

MCQ 24: A system is responsible for detecting, isolating, correcting and recording faults in

A. Reactive Fault Management

B. Stored Fault Management

C. Report Fault Management

D. Reserved Fault Management

MCQ 25: SNMP defines the format of packets exchanged between a manager and an agent, It reads and changes the status of objects in

A. 2NMP packets

B. 4NMP packets

C. 8NMP packets

D. 12NMP packets

MCQ 26: SNMP is responsible for creating a message, called a

A. GetRequest message

B. encoded message

C. senders display message

D. All of them

MCQ 27: The entities of network management system have an initial configuration when the network is set up, but can change with

A. Server

B. Time

C. Entity

D. Proxy

MCQ 28: In Network Management System, a large network is usually made up of hundreds of

A. Domains

B. Protocols

C. Entities

D. IP

MCQ 29: A reactive fault management system is responsible for

A. Detecting and Isolating

B. Correcting, and Recording

C. Security and Recording

D. Both A and B

MCQ 30: The server program running on the agent can check the

A. Information

B. Environment

C. Database

D. SNMP Protocol

MCQ 31: In Network Management System, Fault management is closely related to

A. Performance Management

B. Security Management

C. Active Management

D. Reserved Management

MCQ 32: In Network Management System, the agent keeps performance information in a

A. Domains

B. IP

C. Database

D. Data Protocol

MCQ 33: A switch can allow fast handling of the

A. Tokens

B. Frames

C. Packets

D. Slots

MCQ 34: Adjusting the network components and features, can be a daily occurrence in a large network is called

A. Reconciliation

B. Reservation

C. Restoration

D. Reconfiguration

MCQ 35: SMI objects are named according to a

A. hierarchical tree structure

B. domain name space structure

C. flat name space structure

D. None

MCQ 36: SMI Stands for

A. Solution of Management information

B. Structure of Management information

C. Slots of Management information

D. Sites of Management information

MCQ 37: Simple Network Management Protocol (SNMP), uses the services of UDP on

A. 2 Well-Known Ports

B. 3 Well-Known Ports

C. 4 Well-Known Ports

D. 5 Well-Known Ports

MCQ 38: MIB Stands for

A. Management Information Bytes

B. Management Information Board

C. Management Information Base

D. Management Information Bit

MCQ 39: To creates a collection of named objects, their types and their relationships to each other in an entity to be managed, we use

A. SMI

B. SNMP

C. SMTP

D. MIB

MCQ 40: To define the packet to be sent from a manager to an agent and vice versa, the term is used named

A. SNMP

B. SMTP

C. HTTP

D. URL

Chapter 21

Network Models Multiple Choice Questions

MCQ 1: The size and format of physical addresses vary depending on the

A. Receiver

B. Message

C. Sender

D. Network

MCQ 2: ICMP Stands for

A. Internet Connect Message Protocol

B. Internet Control Message Protocol

C. International Connect Message Protocol

D. International Control Message Protocol

MCQ 3: Transmission Control Protocol/Internet Networking Protocol have

A. Four Layers

B. Five Layers

C. Six Layers

D. Seven Layers

MCQ 4: The parameter that is normally achieved through a trailer added to the end of the frame is

A. Access Control

B. Flow Control

C. Error Control

D. Physical addressing.

MCQ 5: The packets of data that is transported by IP is called

A. datagrams

B. Frames

C. Segments

D. Encapsulate message

MCQ 6: The application layer provides the basis for

A. Email services

B. Frame Division

C. File Making

D. None of above

MCQ 7: The trailer is added only at

A. Physical Layer

B. Data Link Layer

C. transport Layer

D. Network LAYER

MCQ 8: The 0'th layer of OSI model is

A. Physical layer

B. Application layer

C. Presentation layer

D. Hardware

MCQ 9: Segmentation and reassembly is the responsibility of

A. 7th Layer

B. 6th Layer

C. 5th Layer

D. 4th layer

MCQ 10: Port address is also known as

A. Service point address

B. Receiver point address

C. Sender point address

D. Both B and C

MCQ 11: In encapsulation, the data portion of a packet at level N - 1 carries the whole packet from level

A. N

B. N+1

C. N+2

D. N+3

MCQ 12: Physical layer is responsible for

A. Node to node communication

B. Peer to peer communication

C. Hop to hop communication

D. both a and c

MCQ 13: The OSI model deals with physical, data link, network, transport, session and

A. Presentation layer

B. Application layer

C. both a and b

D. None of Above

MCQ 14: A 16-bit port address represents

A. One single number

B. four chunks of numbers

C. two numbers

D. both b and c

MCQ 15: Logical Addresses are

A. 16bit long

B. 32bit long

C. 64bit long

D. 128bit long

MCQ 16: Error Control and Flow Control are the responsibilities of

A. data link and network Layers

B. data link and Physical Layer

C. Application and Presentation Layer

D. data link and Transport Layer

MCQ 17: The both TCP and SCTP protocols are

A. Connection less

B. connection oriented

C. start but no ending

D. None of Above

MCQ 18: The layer that is in between of session and application layer is

A. Network

B. Transport

C. Presentation

D. Data link

MCQ 19: In transport layer, the message is divided into transmittable

A. packets

B. bits

C. Segments

D. frames

MCQ 20: The layer that are used to deal with the mechanical and electrical specifications are

A. Physical Layer

B. Data Link Layer

C. Network Layer

D. Transport Layer

MCQ 21: The Checksum, Error control and Length information are the main features of

A. SCTP

B. IP

C. TCP

D. UDP

MCQ 22: When a message receive at the receiver end, data link layer removes the data meant for it, then passes the rest to

A. Transport

B. Network

C. Physical

D. Session

MCQ 23: The term that refers to a model for understanding and designing a network architecture is called

A. OSI

B. ISO

C. TCP

D. IP

MCQ 24: The physical layer is responsible for movements of individual

A. Bits

B. frames

C. Bytes

D. Packet

MCQ 25: The process on each machine that communicate at a given layer is called

A. peer-to-peer

B. Physical transmission

C. Node to Node

D. Hop to hop

MCQ 26: The network layer is responsible for the

A. Node to node communication

B. Source to destination

C. Hop to hop communication

D. both b and c

MCQ 27: Layer that is responsible for transferring Frames is

A. Application layer

B. Presentation layer

C. Data link layer

D. Session layer

MCQ 28: The physical addresses change from

A. point to point

B. Hop to hop

C. sender to receiver

D. frame to frame

MCQ 29: The length of Port addresses in TCP/IP are

A. 4bit long

B. 16bit long

C. 32bit long

D. None of Above

MCQ 30: The Transmission Control Protocol divides a stream of data into smaller units that are called

A. Frames

B. Datagrams

C. Segments

D. Information

MCQ 31: Layered tasks involve three layers that are

A. sender, receiver and protocol

B. sender, receiver and carrier

C. sender, receiver and transmission medium

D. None of Above

MCQ 32: A signal with 200 mill watts power passes through 10 devices, each with an average noise of2 microwatts, calculate SNR

A. 5000

B. 10000

C. 150

D. 200

MCQ 33: The term that refers to associate a logical address with a physical address is

A. RARP

B. IGMP

C. ARP

D. ICMP

MCQ 34: The TCP/IP layer is equivalent to combined Session, Presentation and

A. Network layer

B. Application layer

C. Transport layer

D. both a and c

MCQ 35: The second layer of the OSI model is

A. Physical

B. Data link

C. Transport

D. Session

MCQ 36: One computer can communicate to another computer by using

A. Port address

B. Physical address

C. Logical address

D. Specific Address

MCQ 37: How many levels of addressing in TCP/IP protocol provides

A. One

B. Two

C. Three

D. four

MCQ 38: Network layer of TCP/IP is responsible for

A. physical addressing

B. Logical addressing

C. port addressing

D. both A and C

MCQ 39: In TCP/IP Protocol, combination of the physical and data link layers are equivalent to the

A. application layer

B. Transport layer

C. Internet Layer

D. Host to network layer

MCQ 40: Framing, Error Control, Flow control, Access control are the responsibilities of

A. 1st layer

B. 2nd layer

C. 3rd layer

D. 4th layer

MCQ 41: At the transport layer, TCP/IP defines

A. Transmission Control Protocol

B. User Datagram Protocol

C. Stream Control Transmission Protocol

D. All of above

MCQ 42: Network support layers are

A. 1, 2, 3

B. 4,5

C. 5,6,7

D. 4

MCQ 43: Which user support layers allow interoperability among unrelated software system

A. 1,2

B. 2,3 4

C. 1,3,6

D. 5,6,7

MCQ 44: The session layer is responsible for

A. Error Control and Flow Control

B. Framing and Access Control

C. dialog control and synchronization

D. Segmentation and reassembly

MCQ 45: TCP/IP does not define any specific protocol at the

A. Network Layer

B. Physical and Data Link Layers

C. Transport layer

D. Internet layer

MCQ 46: Route determination can be identified by

A. Transport layer

B. Application layer

C. Network layer

D. Presentation layer

MCQ 47: Unreliable and connectionless protocol is

A. TCP

B. ARP

C. IP

D. RARP

MCQ 48: A logical address in the Internet is currently a

A. 8 bit address

B. 16 bit address

C. 32 bit address

D. 64 bit address

MCQ 49: Layer of OSI model responsible for synchronization

A. Physical Layer

B. Data Link Layer

C. Session Layer

D. Presentation layer

MCQ 50: A signal in which 1 bit lasts 0.001 s, the Bit rate would be

A. 1kbps

B. 500bps

C. 5obps

D. 1700bps

MCQ 51: The network layer provides the services for

A. application layer

B. Physical layer

C. Session layer

D. Transport layer

MCQ 52: The layer that is responsible for the process to process delivery of the entire message is

A. Transport

B. Session

C. Application

D. Presentation

MCQ 53: How many bits can fit on a link with a 2 ms delay if the bandwidth of the link is 10Mbps

A. 200bits

B. 20,000 bits

C. 200,000bits

D. None of Above

Chapter 22

Network Security Multiple Choice Questions

MCQ 1: Confidentiality with asymmetric-key cryptosystem has its own

A. Entities

B. Data

C. Problems

D. Translator

MCQ 2: SHA-l has a message digest of

A. 160 bits

B. 512 bits

C. 628 bits

D. 820 bits

MCQ 3: Message authentication is a service beyond

A. Message Confidentiality

B. Message Integrity

C. Message Splashing

D. Message Sending

MCQ 4: In Message Confidentiality, the transmitted message must make sense to only intend

A. Receiver

B. Sender

C. Modulor

D. Translator

MCQ 5: A hash function guarantees the integrity of a message. It guarantees that the message has not be

A. Replaced

B. Over view

C. Changed

D. Violated

MCQ 6: To check the integrity of a message, or document, the receiver creates the

A. Hash-Table

B. Hash Tag

C. Hyper Text

D. Finger Print

MCQ 7: A digital signature needs a

A. Private-key system

B. Shared-key system

C. Public-key system

D. All of them

MCQ 8: One way to preserve the integrity of a document is through the use of a

A. Eye-Rays

B. Finger Print

C. Biometric

D. X-Rays

MCQ 9: A session symmetric key between two parties is used

A. Only once

B. Twice

C. Multiple times

D. Conditions dependent

MCQ 10: Encryption and decryption provide secrecy, or confidentiality, but not

A. Authentication

B. Integrity

C. Privacy

D. All of above

MCQ 11: MAC stands for

A. Message authentication code

B. Message arbitrary connection

C. Message authentication control

D. Message authentication cipher

MCQ 12: The digest created by a hash function is normally called a

A. Modification detection code (MDC)

B. Modify authentication connection

C. Message authentication control

D. Message authentication cipher

MCQ 13: Message confidentiality is using

A. Cipher Text

B. Cipher

C. Symmetric-Key

D. Asymmetric-Key

MCQ 14: A sender must not be able to deny sending a message that was sent, is known as

A. Message Nonrepudiation

B. Message Integrity

C. Message Confidentiality

D. Message Sending

MCQ 15: To preserve the integrity of a document, both the document and the fingerprint are

A. Not Used

B. Unimportant

C. Needed

D. Not needed

MCQ 16: When the data must arrive at the receiver exactly as they were sent, its called

A. Message Confidentiality

B. Message Integrity

C. Message Splashing

D. Message Sending

MCQ 17: The message digest needs to be

A. public

B. private

C. kept secret

D. None

MCQ 18: In Message Integrity, the message digest needs to be kept

A. Secret

B. Low

C. High

D. Constant 0

MCQ 19: In Message Integrity, SHA-l hash algorithms create an N-bit message digest out of a message of

A. 512 Bit Blocks

B. 1001 Bit Blocks

C. 1510 Bit Blocks

D. 2020 Bit Blocks

MCQ 20: The Message confidentiality or privacy means that the sender and the receiver expect

A. Integrity

B. Confidentiality

C. Authentication

D. Nonrepudiation

MCQ 21: The message must be encrypted at the sender site and decrypted at the

A. Sender Site

B. Site

C. Receiver site

D. Conferencing

Chapter 23

Process to Process Delivery: UDP, TCP and SCTP Multiple Choice Questions

MCQ 1: Unlike User Datagram Protocol (UDP), the Transmission Control Protocol (TCP) has the Services which is

A. Connection Oriented

B. Connectionless

C. Connection Available

D. Connection Origin

MCQ 2: The maximum size of the TCP header is

A. 20 bytes

B. 40 bytes

C. 60 bytes

D. 80 bytes

MCQ 3: In the Field of User Datagram Protocol (UDP), each user datagram can travel on a

A. Same Path

B. Different Path

C. Single Path

D. Parallel Paths

MCQ 4: In Transmission Control Protocol (TCP), the numbering starts with a

A. 1 always

B. Randomly assigned node

C. Randomly generated number

D. "0" Always

MCQ 5: Transmission Control Protocol (TCP) has the same Checksum controlling like

A. UDP

B. ICMP

C. STMP

D. IP

MCQ 6: In User Datagram Protocol (UDP), checksum calculation is different from the one for IP and

A. TCP

B. TCP/IP

C. FSP

D. ICMP

MCQ 7: In User Datagram Protocol (UDP), queues are associated with

A. Slots

B. IP

C. Ports

D. Packets

MCQ 8: Stream Control Transmission Protocol (SCTP), association allows multiple IP addresses for

A. Only One End

B. No End

C. Each End

D. None of above

MCQ 9: Chargen is one of the well-known ports of

A. UDP

B. TCP

C. TCP/IP

D. ICMP

MCQ 10: A connectionless protocol treats each segment

A. Freely

B. Independently

C. Separately

D. Dependently

MCQ 11: In User Datagram Protocol, when the sender receives the datagram back is known as

A. Path flow

B. Flow Users

C. Echo

D. None of above

MCQ 12: In Stream Control Transmission Protocol (SCTP), control information and data information are carried in

A. Flow Chunks

B. Err-Control Chunk

C. Same Chunks

D. Separate Chunks

MCQ 13: The minimum size of a UDP datagram would be

A. 4 bytes

B. 8 bytes

C. 20 bytes

D. 28 bytes

MCQ 14: Stream Control Transmission Protocol (SCTP), in each connection allows

A. Single-strem service

B. Multistream service

C. Multilevel-stream service

D. Oriented-stream service

MCQ 15: In TCP, When a segment carries a combination of data and control information, it uses a

A. Port Number

B. Sequence Number

C. Slot Number

D. Source Number

MCQ 16: The connection establishment in TCP is called

A. Three- way Handshaking

B. Three-way Data transfer

C. Two-way Handshaking

D. Two-way data transfer

MCQ 17: The User Datagram Protocol (UDP) is using the services of IP to provide

A. Host-to-Host

B. IP-to-IP

C. Process-to-Process

D. Hop-to- Hop

MCQ 18: In Transmission Control Protocol (TCP), the segments are encapsulated in IP datagrams and

A. Recycled

B. Chained

C. Grouped

D. Transmitted

MCQ 19: Transmission Control Protocol (TCP), implements an error control mechanism to provide

A. Unreliability

B. Availability

C. Security

D. reliability

MCQ 20: There can be up to 40 bytes of optional information in the

A. TCP header

B. TCP/IP Header

C. UDP Header

D. IP Header

MCQ 21: In Stream Control Transmission Protocol (SCTP) packet, control chunks come before

A. Stream Chunks

B. Control Chunks

C. Data Chunks

D. Err-Control Chunk

MCQ 22: In Stream Control Transmission Protocol (SCTP), only DATA chunks consume

A. PSTN

B. TSN

C. SSNs

D. SI

MCQ 23: In the Internet model, the port numbers are

A. 16-bit integers

B. 18-bit integers

C. 20-bit integers

D. 22-bit integers

MCQ 24: TCP groups a number of bytes together into a packet called a

A. Buffer register

B. Switch

C. Segment

D. All of them

MCQ 25: In Process to Process delivery, the four pieces of information are part of the

A. Protocol Header

B. Port Header

C. Slot Header

D. IP Header

MCQ 26: Transmission Control Protocol (TCP) is also the protocol like

A. UDP

B. STP

C. ICMP

D. IP

MCQ 27: The ports ranging from 1024 to 49,151 are called

A. Registered ports

B. Well-known ports

C. Dynamic ports

D. Data Ports

MCQ 28: TFTP stands for

A. Trivial File Transformed Path

B. Trivial File Transfer Packet

C. Trivial File Transfer Protocol

D. Trivial File Transformed Protocol

MCQ 29: If the application layer program needs reliability, we use a reliable transport layer protocol by implementing flow and error control at the

A. Physical layer

B. Data link layer

C. Network layer

D. Transport layer

MCQ 30: Transmission Control Protocol (TCP) numbers all data bytes that is transmitted in a

A. Slot

B. Packet

C. Frame

D. Connection

MCQ 31: IANA has divided the port numbers into

A. Pair Ranges

B. Three ranges

C. Pair of four

D. both a and c

MCQ 32: In Process to Process delivery, a transport layer protocol can either be connectionless or

A. Connection organized

B. Connection oriented

C. Connection interlinked

D. Unguided connection

MCQ 33: The transport layer is responsible for

A. Node to node delivery

B. Process-to-process delivery

C. Hop to hop delivery

D. None

MCQ 34: Transmission Control Protocol (TCP) controls the

A. Synchronization

B. Sequence

C. Congestion

D. Connection

MCQ 35: User Datagram Protocol (UDP) is a very simple protocol, using

A. Minimum of overhead

B. Maximum of overhead

C. Periodic Overhead

D. Complex overhead

MCQ 36: In Stream Control Transmission Protocol (SCTP), the sending queue holds chunks from

A. 23 to 55

B. 23 to 40

C. 23 to 53

D. 23 to 51

MCQ 37: IANA Stands for

A. Internet Assigned Node Authority

B. Internet Assigned Native Authority

C. Internet Aligned Number Authority

D. Internet Assigned Number Authority

MCQ 38: There is no flow control and hence no window mechanism in

A. UDP

B. TCP

C. TCP/IP

D. ICMP

MCQ 39: In Internet Assigned Number Authority (IANA), the well-known ports are ranging from

A. 0 to 1023

B. 1 to 1023

C. 2 to 1023

D. 4 to 1023

MCQ 40: In Stream Control Transmission Protocol (SCTP), when a packet is sent, a retransmission timer starts for the

A. Variable

B. Path

C. Packet

D. Segment

MCQ 41: Process-to-process delivery needs two identifiers, IP address and the

A. Range Number

B. Port Number

C. Bit Number

D. Byte Number

MCQ 42: Multistream Delivery is one interesting feature of

A. UDP

B. TSN

C. SCTP

D. IP

MCQ 43: To distinguish between different streams, Stream Control Transmission Protocol (SCTP) uses

A. Stream Borders

B. Stream Identifier

C. Stream Wall

D. Stream ID code

MCQ 44: In Stream Control Transmission Protocol (SCTP), the acknowledgment number and window size is part of each

A. Data Chunk

B. Protocol Chunk

C. Stream Chunk

D. Control Chunk

MCQ 45: Stream Control Transmission Protocol (SCTP) is a new

A. Message-oriented transport layer protocol

B. Connectionless protocol

C. Connection oriented protocol

D. Stream oriented protocol

MCQ 46: Flow control in SCTP is similar to that in

A. TCP

B. UDP

C. SMTP

D. IP

MCQ 47: An association in Stream Control Transmission Protocol (SCTP), can involve

A. Single Stream

B. Multiple Stream

C. Double-level Stream

D. Oriented Stream

MCQ 48: In the transport layer, a message is normally divided into transmittable

A. Segments

B. Signals

C. Networks

D. Frames

MCQ 49: In TCP, each connection have

A. 1 Stream

B. 2 streams

C. 3 streams

D. Infinite Streams

MCQ 50: The field that is used to detect errors over the entire user datagram is called

A. Checksum

B. Error Detection Protocol

C. Source-Error Removal

D. Datagram-Error Removal

MCQ 51: The transport layer may be responsible for flow and error Control, like the

A. Physical Layer

B. Data Link Layer

C. Subnet Layer

D. Application Layer

MCQ 52: ISN stands for

A. Initial slot number

B. Initial string number

C. Initial sequence number

D. Initial source number

MCQ 53: The size of reserved bits in TCP for future use is

A. 2-bit

B. 4-bit

C. 6-bit

D. 8-bit

MCQ 54: The minimum size of the process data that can be encapsulated in a UDP datagram would be

A. 0 bytes

B. 4 bytes

C. 8 bytes

D. 28 bytes

MCQ 55: In User Datagram Protocol (UDP), Source port number is

A. 16 Bits Long

B. 14 Bits Long

C. 12 Bits Long

D. 10 Bits Long

MCQ 56: The service, in which data can flow in both directions at the same time in Transmission Control Protocol (TCP) is called

A. Half-Duplex Communication

B. Full-Duplex Communication

C. Complex-Duplex Communication

D. Doubly-Duplex Communication

MCQ 57: The most common way that is used to achieve process-to-process communication is

A. Node/host paradigm

B. client/server paradigm

C. Network/transport paradigm

D. Process/Program paradigm

MCQ 58: Stream Control Transmission Protocol (SCTP),is a new reliable, message-oriented

A. Transport Layer Protocol

B. Linear Layer Protocol

C. Data Layer Protocol

D. Physical Layer Protocol

MCQ 59: Transmission Control Protocol (TCP), adds a header to each

A. DataByte

B. Slot

C. Segment

D. Frame

MCQ 60: SCTP protocol combines the best features of

A. UDP

B. SMTP

C. TCP

D. both a and c

MCQ 61: The port number used by the process running on the destination host is called

A. Source Port Number

B. Destination Port Number

C. Well-known Port Number

D. IP Port Number

MCQ 62: In SCTP, the receiver stores all chunks that have arrived in its queue including the

A. Out-of-Order Ones

B. Out-of-Flow Ones

C. Out-of-Reach Ones

D. Out-of-Index Ones

MCQ 63: In Process to Process delivery, the server process must also define itself with a

A. Slot Number

B. Port Number

C. Bit Number

D. Byte Number

MCQ 64: To distinguish between different data chunks belonging to the same stream, SCTP uses

A. Stream Sequence Number

B. Stream Serial Number

C. Stream Segment Number

D. Stream Slot Number

MCQ 65: Unlike UDP, TCP is a

A. Connectionless protocol

B. Stream-oriented protocol

C. Connection oriented protocol

D. BOTH A and C

MCQ 66: The Dynamic ports ranges from

A. 0 to 1023

B. 1024 to 49,151

C. 49,152 to 65,535

D. 0 to 65,535

MCQ 67: Numbering System is one of the prominent feature of

A. UDP

B. TCP

C. TCP/IP

D. IP

MCQ 68: In Transmission Control Protocol (TCP), the segments are not necessarily the same

A. Address

B. Transit time

C. Size

D. Group

MCQ 69: TCP has segments, while Stream Control Transmission Protocol (SCTP) has

A. Frames

B. Slots

C. Packet

D. Path Slots

MCQ 70: The User Datagram Protocol (UDP) perform very limited service of

A. Error Detecting

B. Error Controlling

C. Error Checking

D. Error Removing

MCQ 71: The bytes of data being transferred in each connection are numbered by

A. TCP

B. UDP

C. SMTP

D. SCTP

MCQ 72: A connection in SCTP is called an

A. Node

B. Interface

C. Chunk

D. Association

MCQ 73: A packet in Transmission Control Protocol (TCP) is called a

A. Transmittable slots

B. Packet

C. Segment

D. Source Slots

MCQ 74: In User Data Protocol (UDP), the destination port number is of length

A. 16 bits

B. 18 bits

C. 24 bits

D. 32 bits

MCQ 75: The formula to get the length of User Data Protocol (UDP) is

A. UDP length = IP length + IP header's length

B. UDP length = IP length X IP header's length

C. UDP length = IP length - IP header's length

D. UDP length = IP length / IP header's length

MCQ 76: A process that requires simple request-response communication with concern for flow and error control is called

A. UDP

B. ICMP

C. TCP

D. TCP/IP

MCQ 77: The data link layer is responsible for

A. Node-to-Node delivery

B. Host-to-Source host delivery

C. Process to Process delivery

D. Source to Host Delivery

MCQ 78: In Process to Process delivery, the layer that is responsible for the delivery of a message from one process to another is called

A. Physical layer

B. Data link layer

C. Network layer

D. Transport layer

MCQ 79: The transport layer is responsible for process-to-process delivery of the

A. Message

B. Address of Message

C. Few Packets of Message

D. Partial Message

MCQ 80: In User Datagram Protocol (UDP), when the process is terminated, the queues are

A. Changed

B. Regenerated

C. Indexed

D. Destroyed

MCQ 81: In Stream Control Transmission Protocol (SCTP), the whole purpose of an association is to transfer data between

A. 2 Ends

B. Multi Ends

C. Single End

D. None of above

MCQ 82: In TCP, the field of source port address is of length

A. 16 Bits

B. 18 Bits

C. 20 Bits

D. 24 Bits

MCQ 83: The calculation of the checksum and its inclusion in a user datagram is

A. Mandatory

B. Optional

C. Independent

D. Compulsory

MCQ 84: The User Datagram Protocol (UDP) is

A. Connectionless

B. Unreliable

C. Powerless

D. All of them

MCQ 85: In Transmission Control Protocol (TCP), Urgent point filed have the length of

A. 24 Bits

B. 22 Bits

C. 18 Bits

D. 16 Bits

MCQ 86: In Transmission Control Protocol (TCP), the segment consists of a 20 to

A. 80bytes Header

B. 90bytes Header

C. 50bytes Header

D. 60bytes Header

MCQ 87: Stream Control Transmission Protocol (SCTP), uses all well-known ports in the

A. UDP

B. SMTP

C. TCP

D. IP

MCQ 88: The Dynamic ports are also known as

A. Private Ports

B. Host Ports

C. Target Ports

D. None of above

MCQ 89: TCP stands for

A. Transmission Control Path

B. Transmission Control Ports

C. Transmission Control Packet

D. Transmission Control Protocol

MCQ 90: The operations of transport layer is as same as the

A. TCP

B. TCP/IP

C. ICMP

D. UDP

MCQ 91: The inclusion of the checksum for Transmission Control Protocol (TCP), is

A. Optional

B. Mandatory

C. Dependent

D. Sync-ed

MCQ 92: UDP is used for management processes such as

A. SMTP

B. TCP/IP

C. SNMP

D. TCP

MCQ 93: TCP adds connection-oriented and reliability features to the services of

A. ICMP

B. SMTP

C. IP

D. UDP

MCQ 94: In Process to Process delivery, At the transport layer, we need a transport layer

A. IP

B. Link

C. Address

D. Header

MCQ 95: Transmission Control Protocol (TCP), is known as

A. Virtual Connections

B. Physical Connections

C. Source Connections

D. Transfer Protocol Connections

MCQ 96: The User Datagram Protocol (UDP) is stored in an IP datagram with a total length of

A. 65,505 bytes

B. 65,515 bytes

C. 65,525 bytes

D. 65,535 bytes

MCQ 97: A connectionless transport layer treats each segment as an

A. Simple DataFrame

B. IP DataFrame

C. Framed Packet

D. Independent Packet

MCQ 98: In Transmission Control Protocol (TCP), the segments are used for

A. Connection Establishment

B. Connection Abortion

C. Both A and B

D. Connection Synchronization

MCQ 99: In Transmission Control Protocol (TCP), the value of the urgent pointer field is

A. Invalid

B. Valid

C. Set to 1

D. Set to 0

MCQ 100: In Transmission Control Protocol (TCP), the numbering system allows to use a byte-oriented

A. Flow Control

B. Error Control

C. Segment Control

D. Packet Control

MCQ 101: In Stream Control Transmission Protocol (SCTP), the receiver has one buffer (queue) and three

A. Chunks

B. Slots

C. Entries

D. Variables

MCQ 102: Data is exchanged in both directions in

A. UDP

B. TCP

C. ICMP

D. IP

MCQ 103: User Datagram Protocol (UDP), have a fixed-size header of

A. 10 Bytes

B. 08 Bytes

C. 06 Bytes

D. 04 Bytes

MCQ 104: To obtain header length, we calculate it by

A. (5 X 4= 20) and (15 X 4= 60)

B. (10 X 2= 20) and (30 X 2= 60)

C. (4 X 5= 20) and (20 X 3= 60)

D. (2 X 10= 20) and (10 X 6= 60)

MCQ 105: TCP processes at the

A. Physical layer

B. Data link layer

C. Session layer

D. Application layer

MCQ 106: A connection oriented protocol creates a relationship between the segments using

A. Sequence Frame

B. Sequence Packets

C. Flow Path

D. Sequence Numbers

MCQ 107: No retransmission timer is set for an

A. RTO

B. ACK segment

C. FIN segment

D. Checksum segment

MCQ 108: When a server wants to respond to a client, it sends messages to the outgoing queue, using the source port number specified in the

A. Port

B. Request

C. DataFrame

D. Packets

MCQ 109: In Stream Control Transmission Protocol (SCTP), the checksum is of

A. 16 Bits

B. 32 Bits

C. 64 Bits

D. 128 Bits

MCQ 110: In Process to Process delivery, a transport layer protocol needs a pair of

A. Frame Address

B. Destination Address

C. Socket Address

D. IP Address

MCQ 111: The User Datagram Protocol (UDP) is called a

A. Connection Oriented protocol

B. Connectionless protocol

C. Communication-path Protocol

D. Connection organizing protocol

MCQ 112: Transmission Control Protocol (TCP), Synchronize sequence numbers during

A. Pushing Data

B. Transformation

C. Connection

D. Controlling

MCQ 113: Stream Control Transmission Protocol (SCTP), a data chunk is numbered using a

A. TSN

B. SI

C. SSNs

D. All of above

MCQ 114: An ACK segment, if carrying no data still consumes

A. One sequence number

B. Two sequence number

C. Three sequence number

D. No sequence number

MCQ 115: Transmission Control Protocol (TCP), needs buffers for

A. Storage

B. Request

C. Connections

D. Transmission

MCQ 116: In User Datagram Protocol (UDP), the user datagrams are not

A. Channeled

B. Transformed

C. Numbered

D. Addressed

MCQ 117: Transmission Control Protocol (TCP), a connection-oriented transport protocol establishes a

A. Virtual Communication

B. Virtual Path

C. Virtual Flow

D. Virtual Header

MCQ 118: In Process to Process delivery, the ports ranging from 49,152 to 65,535 are called

A. Registered ports

B. Well-known ports

C. Dynamic ports

D. Data Ports

MCQ 119: User Datagram Protocol (UDP), is a suitable transport protocol for

A. Unicasting

B. Multicasting

C. Multilevel-cast

D. Multiple Unicast

MCQ 120: Association establishment in Stream Control Transmission Protocol (SCTP), requires a

A. 2 Way Handshake

B. 3 Way Handshake

C. Four Way Handshake

D. 1 Way Handshake

Chapter 24

Remote Logging, Electronic Mail and File Transfer Multiple Choice Questions

MCQ 1: In Remote Logging, a user logs into a local timesharing system, it is called

A. local log-in

B. local log-out

C. local login Code

D. local log-off code

MCQ 2: MIME stands for

A. Multipurpose Internet Mail Extensions

B. Multipurpose Internet Mail Email

C. Multipurpose International Mail Entity

D. Multipurpose International Mail End

MCQ 3: In File Transfer Protocol (FTP), while the control connection is open, the data connection can be opened and closed

A. One time

B. Several Times

C. Not even Once

D. None of the given

MCQ 4: File Transfer Protocol (FTP), uses the same operation used by

A. ICMP

B. STMP

C. TCP

D. FSK

MCQ 5: File Transfer Protocol (FTP), uses the well-known port 21 is used for the control connection and port 20 for the

A. Data Rate

B. Data Connection

C. Data Protocol

D. Data Congestion

MCQ 6: In the architecture of e-mail, we can have

A. 2 Scenarios

B. 3 Scenarios

C. 4 Scenarios

D. 6 Scenarios

MCQ 7: In File Transfer Protocol (FTP), a user needs an account (user name) and a password on the

A. Same Server

B. Remote Server

C. Central Server

D. Data Host

MCQ 8: In EMAIL, We need two VAs and two pairs of MTAs, when the sender is connected to the mail server via

A. MTA and VTA

B. LAN and WAN

C. IP and TCP

D. Host and IP

MCQ 9: Mail access starts with the client when the user needs to download e-mail from the

A. Mail Box

B. Mail Server

C. Mail Host

D. Internet

MCQ 10: TELNET is a general-purpose

A. Client/server application program

B. Database-server application program

C. Client-End application program

D. Server-End application program

MCQ 11: Example of command-driven user agents are

A. mail

B. pine

C. elm

D. All of them

MCQ 12: When the sender and the receiver of an e-mail are on the same system, we need only two

A. IP

B. Domain

C. Servers

D. User Agents

MCQ 13: The command of End-of-File in the UNIX operating system is

A. Ctrl+E

B. Ctrl+v

C. Ctrl+u

D. Ctrl+d

MCQ 14: Most TELNET implementations operate in one of the modes

A. Default mode

B. Character mode

C. Line mode

D. All of them

MCQ 15: An Email can have fields like, a number, a sender, size of the message and

A. Optional subject field

B. Flag Field

C. Mode field

D. Both A and B

MCQ 16: Examples of GUI based user agents are Eudora, Netscape and

A. Email

B. Outlook

C. Pine

D. Elm

MCQ 17: In electronic mail, the MTA transfers the mail across the Internet via

A. LAN

B. WAN

C. MAN

D. both a and b

MCQ 18: The well-known port used for FTP's control connection is

A. Port 6

B. Port 8

C. Port 20

D. Port 21

MCQ 19: MTA stands for

A. Message transmission agent

B. Message transfer agents

C. Message transmission align

D. Message transfer again

MCQ 20: FTP copies a file from

A. node to node

B. one host to another

C. from servers

D. one network to other

MCQ 21: For transmission FTP requires

A. 2 connections

B. 3 connections

C. 4 connections

D. 5 connections

MCQ 22: The three modes of TELNET implementations are default mode, character mode and

A. Server Mode

B. Line Mode

C. Log Mode

D. IP Mode

MCQ 23: When the sender and the receiver of an e-mail are on different systems, we need two VAs and a pair of

A. MTA

B. VTA

C. IP

D. TCP

MCQ 24: When the sender and the receiver of an e-mail are on the same system, we need only

A. Two user agents

B. One user agent

C. Multiple Agents

D. No Agents

MCQ 25: In File Transfer Protocol (FTP), the data connection is opened and then closed for each

A. File Opened

B. File Altered

C. File Closed

D. File Transferred

MCQ 26: Post Office Protocol, version 3 (POP3), has two modes, Delete Mode and

A. Outbox Mode

B. Keep Mode

C. Idle Mode

D. Function Mode

MCQ 27: The FTP uses the services of

A. TCP

B. UDP

C. SMTP

D. DDNS

MCQ 28: NVT Stands for

A. Network Virtual Transmission

B. Network Virtual Token

C. Network Virtual Terminal

D. Network Virtual Time

MCQ 29: Post Office Protocol, version 3 (POP3) is simple and limited in

A. Usage

B. Availability

C. DataType

D. Functionality

MCQ 30: At the beginning of the Internet era, the messages sent by electronic mail were short and consisted of

A. Images Only

B. Strings only

C. Text Only

D. Numbers Only

Chapter 25

Security in Internet: IPSec, SSUTLS, PGP, VPN and Firewalls Multiple Choice Questions

MCQ 1: A proxy firewall filters at the

A. Physical layer

B. Application layer

C. Data link layer

D. Network layer

MCQ 2: A packet.filter firewall filters at the

A. Application or transport

B. Data link layer

C. Physical Layer

D. Network or transport layer

MCQ 3: The AH Protocol provides source authentication and data integrity, but not

A. Integrity

B. Privacy

C. Nonrepudiation

D. Both A and C

MCQ 4: The SSL divides the data into blocks of

A. 2 x 6

B. 2 x 14

C. 2 x 20

D. 2 x 24

MCQ 5: The ESP provides

A. Source authentication

B. Data integrity

C. Privacy

D. All of them

MCQ 6: One of the protocols to provide security at the application layer is

A. Pretty Good Privacy

B. Handshake Protocol

C. Alert Protocol

D. Record Protocol

Chapter 26

SONET Multiple Choice Questions

MCQ 1: The section layer is responsible for the movement of a signal across a

A. Physical Channel

B. Physical Line

C. Physical Section

D. Physical Station

MCQ 2: In SONET, the duration of any frame is

A. 110 µs

B. 120 µs

C. 125 µs

D. 135 µs

MCQ 3: In STS, multiplexing can also take place at the higher

A. Data Rates

B. Frame Rates

C. Clock Rates

D. SONET Rates

MCQ 4: At the optical source, the signal is changed from an electronic form into an

A. Absolute form

B. Optical Form

C. Dynamic form

D. Resolved form

MCQ 5: APS stands for

A. Automatic Protection Solutions

B. Automatic Protection Switching

C. Automatic Protected Signals

D. Automatic Protected Station

MCQ 6: The SONET Layer that is responsible for the movement of a signal across a physical line is called

A. Line Layer

B. Section Layer

C. Path Layer

D. Photonic Layer

MCQ 7: SONET/SDH is a synchronous network using synchronous

A. TDM multiplexing

B. CDMA multiplexing

C. TDM demultiplexing

D. CDMA demultiplexing

MCQ 8: OCs stands for

A. Optical Communications

B. Optical Carriers

C. Optical Cells

D. Optical Coordinates

MCQ 9: SONET networks are divided into

A. 3 Stations

B. 4 Base Stations

C. 3 Categories

D. 4 Mediums

MCQ 10: UPSR stands for

A. Unidirectional Path Signal Ring

B. Unidirectional Path Station Ring

C. Unidirectional Path Switching Ring

D. Unidirectional Path SONET Ring

MCQ 11: A regenerator is a repeater that takes a received

A. Optical Station

B. Optical System

C. Optical beam

D. Optical Signal

MCQ 12: In SONET, all clocks in the network are locked to a

A. master clock

B. antilock zone

C. master zone

D. None

MCQ 13: The frame design which includes a system of virtual tributaries, To make SONET backward-compatible with the

A. Current Network

B. Current Hierarchy

C. Current Medium

D. Current Systems

MCQ 14: Each synchronous transfer signal is composed of

A. 8 frames

B. 80 frames

C. 800 frames

D. 8000 frames

MCQ 15: The movement of a signal from its optical source to its optical destination is the responsibility of

A. Optical Layer

B. Section Layer

C. Path Layer

D. Transport Layer

MCQ 16: POH stands for

A. Path overhead

B. Polar Overlook

C. Pin Overlook

D. Plot Overhead

MCQ 17: SONET frame can carry information from a digitized voice

A. Media

B. Channel

C. Station

D. Signal

MCQ 18: A SONET network, can be used as a high-speed backbone carrying loads from other networks such as

A. Card Swapping Machine

B. ATM

C. Master Card

D. Gold Card

MCQ 19: In Ring network, UPSR uses 2 rings for working lines and BLSR uses

A. 4 rings

B. 2 rings

C. 6 rings

D. 8 rings

MCQ 20: SONET defines four layers: path, line, section and

A. Monographic

B. Photonic

C. Geographic

D. Graphonic

MCQ 21: STM stands for

A. Synchronous Transmission Mode

B. Synchronous Transport Model

C. Synchronous Transmission Model

D. Synchronous Transport Module

MCQ 22: The photonic layer corresponds to the physical layer of the

A. SDH Model

B. CDMA Model

C. ANSI Model

D. OSI Model

MCQ 23: SONET transmission relies on

A. multiplexers/DE multiplexers

B. regenerators

C. add/drop multiplexers and terminals

D. All of them

MCQ 24: A section connecting two neighbor devices is called

A. Optical Station

B. Optical Server

C. Optical Link

D. Optical Channel Link

MCQ 25: A virtual tributary is a partial

A. Component Load

B. Simple Load

C. Current Load

D. Pay Load

MCQ 26: A linear SONET network can be

A. Point to Point

B. Multi Point

C. Multilevel Point

D. A and B

MCQ 27: In Sonet Frames, encapsulation may create two problems that are handled elegantly by

A. SDH

B. SONET

C. FSK

D. CDMA

MCQ 28: LOH stands for

A. Line of Hold

B. Line overhead

C. Line Overlook

D. Line overheld

MCQ 29: BLSR stands for

A. Bidirectional Line Switching Ring

B. Bidirectional Linear Switching Ring

C. Bidirectional LAN Switching Ring

D. Bidirectional Link Switching Ring

MCQ 30: In Sonet Network, the data is sent over the working line until it fails, is

A. One-Plus-One APS

B. One-to-One APS

C. One-to-Many APS

D. Both A and B

MCQ 31: When the traffic in a ring increases, the performance can be enhanced by

A. Physical Network

B. MultiLink Network

C. Linear Networks

D. Mesh Network

MCQ 32: A unidirectional path switching ring (UPSR) is a unidirectional network with

A. two rings

B. four rings

C. six rings

D. eight rings

MCQ 33: Asynchronous Transfer Mode (ATM) network is a

A. Beam Network

B. Cell Network

C. Package Network

D. Frame Network

MCQ 34: Now a days, SONET networks are using a combination of

A. Interconnected Rings

B. Interconnected Links

C. Interconnected Nodes

D. Interconnect Databits

MCQ 35: In Sonet Frames, the section overhead consists of

A. 12 octets

B. 11 Octets

C. 10 Octets

D. 9 Octets

MCQ 36: Bidirectional Line Switching Ring (BLSR) is used

A. one ring

B. two rings

C. three rings

D. four rings

MCQ 37: ADM stands for

A. Add Drop Multiplexer

B. Add Drop Module

C. Ace Drop Model

D. Ace Drop Multiplexer

MCQ 38: The Bidirectional Line Switching Ring (BLSR) is similar to the

A. Many-to-Many APS Scheme

B. One-to-One APS Scheme

C. One-to-Many APS Scheme

D. None of above

MCQ 39: We need two pointers HI and H2 in the

A. Line of Hold

B. Line overhead

C. Line Of Hat

D. Line overheld

MCQ 40: A terminal is a device that uses the services of a

A. SDH

B. SONET

C. CDMA

D. All of above

MCQ 41: SONET defines

A. four layers

B. ten layers

C. eighteen layers

D. None

MCQ 42: SONET defines a hierarchy of electrical signaling levels called

A. Synchronous Transport System

B. Synchronous Transport Station

C. Synchronous Transport Signals

D. Synchronous Transport Solution

MCQ 43: In Sonet network, a switch in a network mesh is called a

A. Cross-Connect

B. Cross-Switch

C. Cross-Communication

D. Cross-Cells

MCQ 44: System Transport Signal (STS) multiplexer multiplexes signals from multiple sources and creates

A. Optical Network

B. Optical Signal

C. Optical device

D. None of above

MCQ 45: Another alternative switching ring in a SONET ring network is

A. UPSR

B. BLSR

C. ADSR

D. MPSR

MCQ 46: In Sonet Network, a point-to-point network is normally made of an

A. STS multiplexer

B. STS demultiplexer

C. Regenerators

D. add/drop multiplexers

MCQ 47: Multiplexing is synchronous

A. FDM

B. WDM

C. TDM

D. CDMA

MCQ 48: One problem with ring networks is the lack of

A. Availability

B. Compatibility

C. Scalability

D. Visibility

MCQ 49: The SONET standard includes four functional

A. Systems

B. Stations

C. Layers

D. Orbits

MCQ 50: SONET defines Automatic Protection Switching (APS), to create protection against failure in

A. Multipoint Network

B. Ring Network

C. Mesh Networks

D. Linear Networks

MCQ 51: In STS Multiplexing, concatenated signals carrying

A. 44 ATM Data

B. 44 ATM Signals

C. 44 ATM Cells

D. 44 ATM Frames

MCQ 52: Types of VT have been defined to accommodate existing digital hierarchies, they have

A. No Type

B. Two Types

C. Four Types

D. Eight Types

MCQ 53: SONET was developed by

A. SDH

B. ANSI

C. SDF

D. ANST

MCQ 54: A Sonet Network, in wchich sender uses a two-way connection to send data to both rings simultaneously is

A. ADSR

B. UPSR

C. CDMA/SR

D. MPSR

MCQ 55: In SONET, all clocks in the network are locked to achieve

A. Data Handling

B. Packets handling

C. Synchronization

D. Error Handling

MCQ 56: A network that uses ADMs to allow the communications between several terminals is called

A. Point to Point

B. Multipoint Network

C. Linear Networks

D. SONET Networks

MCQ 57: In STS Multiplexer, the type of signal at the input and output of an add/drop multiplexer is

A. Different

B. Zero

C. Converted

D. Same

MCQ 58: In Sonet Frames, line overhead consists of

A. 38 Bytes

B. 28 Bytes

C. 18 Bytes

D. 9 Bytes

MCQ 59: A ring SONET network can be

A. unidirectional

B. omnidirectional

C. bidirectional

D. both a and c

Chapter 27

Switching Multiple Choice Questions

MCQ 1: Switching in the Internet is done by using the datagram approach to packet switching at the

A. network layer

B. application layer

C. data link layer

D. physical layer.

MCQ 2: A Circuit-Switched Network is made of a set of switches connected by physical

A. links

B. media

C. nodes

D. lines

MCQ 3: $\mathrm{Iog}_2 8$ =

A. 0

B. 1

C. 2

D. 3

MCQ 4: A switch in a datagram network uses a

A. destination address

B. sender address

C. routing table

D. header

MCQ 5: The routing processor searching for the routing table is called

A. switch fabric

B. buffer

C. table lookup

D. rolling table

MCQ 6: A Virtual-Circuit Network (VCN) is normally implemented in the

A. session layer

B. data link layer

C. network layer

D. physical layer

MCQ 7: Which frame completes the entries in the switching tables?

A. acknowledgment frame

B. setup frame

C. routing frame

D. None

MCQ 8: Virtual-Circuit Networks and datagram networks are the sub categories of

A. message-switched networks

B. Packet-switched networks

C. Circuit-Switched Networks

D. None of them

MCQ 9: The actual communication in a circuit-switched network requires

A. one phase

B. two phases

C. three phases

D. four phases

MCQ 10: In a packet-switched network, resources are allocated

A. randomly

B. on demand

C. reserved already

D. both a and c

MCQ 11: Datagram switching is done at the

A. network layer

B. physical layer

C. session layer

D. data link layer

MCQ 12: Setup, data transfer and connection teardown are three phases of

A. circuit switching

B. packet switching

C. message switching

D. None

MCQ 13: Only one packet for each destination is allowed at each tick; if there is more than one, they wait for the next tick in

A. Banyan switch

B. Batcher-banyan switch

C. crossbar switch

D. time-space-time switch

MCQ 14: A switch that connects n inputs to m outputs in a grid, using electronic micro switches at each cross point is called

A. crossbar

B. crosspoint

C. multistage

D. onstage

MCQ 15: Circuit switching takes place at the

A. session layer

B. application layer

C. data link layer

D. physical layer.

MCQ 16: In Circuit Switching, the resources needs to be reserved during the

A. Data transfer phase

B. teardown phase.

C. setup phase

D. propagation phase

MCQ 17: Circuit Switched Networks are used in

A. cellular network

B. satellite network

C. Cable network

D. telephone network

MCQ 18: The port that performs the physical and data link functions of the packet switch is called

A. input port

B. output port

C. routing port

D. switching fabric

MCQ 19: The phase where the establishment of the channels takes place is

A. setup phase

B. Data transfer phase

C. teardown phase

D. Both A and B

MCQ 20: The Asynchronous Transfer Mode (ATM) network is an example of

A. Packet switching network

B. Datagram Networks

C. Virtual circuit network

D. message switched network

MCQ 21: The term that refers the switch does not keep information about the connection state, is

A. connection setup

B. connectionless

C. switchless

D. teardown

MCQ 22: A switch in a datagram network uses a routing table that is based on the

A. source addresses

B. port addresses

C. destination address

D. None

MCQ 23: Time Division Multiplexing inside a switch, is used by

A. Space division switch

B. crossbar switch

C. packet switch

D. time division switch

MCQ 24: The network where there is no resource reservation is called

A. Circuit-Switched Networks

B. message-switched networks

C. Packet-switched networks

D. satellite network

MCQ 25: The identifier that is actually used for data transfer is called the

A. virtual-circuit identifier

B. global address

C. local address

D. header

MCQ 26: Three methods of switching are

A. circuit switching, packet switching, and protocol switching

B. circuit switching, packet switching, and message switching

C. Loop switching, packet switching, and message switching

D. Node switching, packet switching, and message switching

MCQ 27: A circuit-switched network is made of switches connected by physical links, in which each link is divided into

A. n channels

B. n+1 channels

C. 2n channels

D. n-1 channels

MCQ 28: A switched network consists of a series of interlinked nodes, called

A. endpoints

B. packets

C. switches

D. links

MCQ 29: Global and local addressing are types of

A. WAN network

B. local area circuit network

C. virtual-circuit network

D. MAN network

Chapter 28

Transmission Media Multiple Choice Questions

MCQ 1: Transmission media are directly controlled by the

A. physical layer

B. data link layer

C. network layer

D. session layer

MCQ 2: The electromagnetic waves ranging in frequencies between 3 kHz and 1 GHz are called

A. High frequency

B. Infrared

C. Microwaves

D. radio waves

MCQ 3: The ray of light refracts and moves closer to the surface then the angle of the incidence is

A. equal to the critical angle

B. not equal to the critical angel

C. less than the critical angle

D. greater than the critical angle

MCQ 4: Guided media provides a conduit from one device to another, includes

A. twisted pair cable

B. fiber optic cable

C. coaxial cable

D. All of above

MCQ 5: RG-59 is used in

A. radio

B. thick Ethernet

C. thin Ethernet

D. cable TV

MCQ 6: In telecommunications, transmission media can be divided into

A. four broad categories

B. three broad categories

C. two broad categories

D. None

MCQ 7: The twisted pair cable in which metal casing improves the penetration of noise or crosstalk is called

A. insulated twisted pair cable

B. Shielded twisted pair cable

C. Unshielded twisted pair cable

D. Both A and B

MCQ 8: Line-of-sight propagation lies above

A. 3 KHz

B. 30 MHz

C. 15 MHz

D. 2 KHz

MCQ 9: In single mode, the decrease in density results in a critical angle that is close enough to

A. 180°

B. 360°

C. 0°

D. 90°

MCQ 10: Optical fibers use reflection to guide light through a

A. channel

B. metal wire

C. light

D. plastic

MCQ 11: In the electromagnetic spectrum for wireless communication, the reserved range for Radio waves and microwaves is known as

A. ground propagation

B. sky propagation

C. line-of-sight propagation

D. None

MCQ 12: 7/125 is the fiber type used in propagation mode:

A. single mode

B. multimode

C. multimode, step index

D. multimode, graded index

MCQ 13: The long-distance communication using electric signals was started with the invention of the telegraph by Morse in

A. 19th century

B. 18th century

C. 20th century

D. middle of 18 and 19 century

MCQ 14: Super High frequency (SHF) is used in

A. FM radio

B. satellite communication

C. AM radio

D. cellular phones

MCQ 15: The range of middle frequency is

A. 3-30 kHz

B. 900KHz-300 kHz

C. 3khz-30 MHz

D. 300 kHz-3 MHz

MCQ 16: Unguided medium is

A. twisted pair cable

B. coaxial cable

C. fiber optic cable

D. free space

MCQ 17: Radio waves are

A. unidirectional

B. omnidirectional

C. bidirectional

D. directional

MCQ 18: Unguided signals can travel from the source to destination in

A. one way

B. two ways

C. three ways

D. four ways

MCQ 19: Microwaves having frequency between

A. I and 300 GHz

B. 3 kHz and 1 GHz

C. 300 kHz and 1 GHz

D. 1GHz and 300 GHz

MCQ 20: Propagation of light is

A. unidirectional

B. bidirectional

C. multimode

D. single mode

MCQ 21: The twisted pair cable consists of

A. none

B. 1 conductor

C. 2 conductors

D. n conductors

MCQ 22: Infrared signals can be used for

A. long-range communication

B. short-range communication

C. both

D. none

MCQ 23: The electromagnetic spectrum is divided into 8 ranges called

A. bands

B. propagation

C. channel

D. Chains

MCQ 24: The cable that accepts and transports signals in the form of light is

A. Unwired

B. fiber optic cable

C. coaxial cable

D. twisted pair cable

MCQ 25: The Ultra High Frequency (UHF) is using the propagation method of

A. Sky

B. Ground

C. Line of sight

D. Sky, Line of sight

MCQ 26: Infrared waves, that can be used for short range communication have frequencies between

A. 300 GHz to 700 THz

B. 300 GHz to 800 THz

C. 300 GHz to 100 THz

D. 300 GHz to 400 THz

MCQ 27: How many modes are currently in used for propagating light along optical channels

A. one mode

B. two modes

C. three modes

D. five modes

MCQ 28: The term that is used to measure of the thickness of the wire is

A. decibels

B. hertz

C. gauge

D. diameter

MCQ 29: Microwaves are used for

A. short-range communication

B. multicast communications

C. unicast communication

D. long range communication

MCQ 30: Fast Ethernet uses

A. Free space

B. Twisted pair cable

C. fiber optic cable

D. Coaxial cable

MCQ 31: Shielded Screen Twisted pair decreases crosstalk effect and increases the data rate upto

A. 100Mbps

B. 125Mbps

C. 200Mbps

D. 600Mbps

MCQ 32: In line-or-sight propagation, very high-frequency signals are transmitted in straight lines directly from antenna to

A. sky

B. earth

C. antenna

D. planet

MCQ 33: Unguided medium is

A. twisted-pair cable

B. coaxial cable

C. fiber-optic cable

D. free space

MCQ 34: Infrared waves are used for

A. outdoor LANs

B. indoor LANs

C. Wireless LANs

D. satellite

MCQ 35: The omnidirectional antennas send out signals in

A. one direction

B. 2 directions

C. no direction

D. all directions

MCQ 36: The radio waves, micro- waves and infrared waves are types of

A. wireless transmission

B. guided transmission

C. both a and b

D. None

MCQ 37: The term that refers to a strong material used in the fabrication of bulletproof vests is called

A. Kevlar

B. outer jacket

C. cladding

D. None of above

MCQ 38: Wireless communication started in

A. 1869

B. 1895

C. 1879

D. 1885

MCQ 39: In Coaxial Cable, the whole cable is protected by a

A. shield

B. plastic cover

C. insulator

D. conductor

MCQ 40: The most common twisted-pair cable used in communications are

A. UTP

B. STP

C. normal twisted copper pair cables

D. None

MCQ 41: The connector that is used for connecting cable to networking devices is called

A. subscriber channel (SC)

B. straight-tip (ST)

C. MT-RJ

D. None of them

MCQ 42: The most common unshielded twisted pair connector is

A. RJ-45

B. RG-59

C. RG-58

D. RG-ll

MCQ 43: A signal that is the result of a conversion of data from another form is known as

A. transmission medium

B. data

C. information

D. communication

MCQ 44: The wireless transmission is divided into

A. 3 broad groups

B. 6 broad groups

C. 9 broad groups

D. 8 broad groups

MCQ 45: Omni directional waves are propagated in

A. one direction

B. all directions

C. depends on situation

D. both a and c

MCQ 46: In multimode propagation, the term step index refers to the

A. index of refraction

B. sudden change of signal

C. index of density

D. index of light rays

MCQ 47: Unshielded Twisted-Pair cables are used in

A. telephone lines

B. DSL lines

C. LAN

D. All of above

Chapter 29

Virtual Circuit Networks: Frame Relay and ATM Multiple Choice Questions

MCQ 1: If the message in the Segmentation and Reassembly sublayer of the AAL3/4 has the value of the Segment type 11, then it is a

A. Initiation of message

B. ending message

C. single-segment message

D. multi-segment message

MCQ 2: Frame Relay is very cheap than other

A. LANs

B. WANs

C. MANs

D. Multipoint Networks

MCQ 3: The VPI is the same for all virtual connections that are bundled (logically) into

A. 4 VP

B. 3 VP

C. 2 VP

D. 1 VP

MCQ 4: Frame Relay networks offer an option called

A. Voice over for Relay

B. Voice over Fine Relay

C. Voice on Frame Relay

D. Voice over Frame Relay

MCQ 5: The term which is used to increase the speed of the switches to handle the data is known as

A. Switching Routes

B. Switching fabric

C. Switching Data

D. Switching Frames

MCQ 6: In the LAN Emulation (LANE), multicasting and broadcasting require the use of another server, known as

A. BUS

B. LES

C. LANE

D. LEC

MCQ 7: The congestion control and quality of service is the qualities of the

A. ATM

B. PVC

C. Frame Relay

D. SONET

MCQ 8: In cell network, the basic unit of the of data exchange is called

A. Framing

B. Switching

C. Column

D. Cell

MCQ 9: VP stands for

A. Virtual paths

B. Virtual Protocol

C. Virtual Plots

D. Virtual Plan

MCQ 10: The Header error control (HEC) field is used to correct errors in the header of the

A. SAR

B. CS

C. SONET

D. DH

MCQ 11: GFC stands for

A. Generic flow control

B. Generic frame cell

C. Generic flow coordinate

D. Generic frame control

MCQ 12: The total number of features of frame relay is

A. five

B. seven

C. nine

D. ten

MCQ 13: In Asynchronous Transfer Mode (ATM), the cell has

A. 34 Bytes

B. 44 Bytes

C. 53 Bytes

D. 63 Bytes

MCQ 14: In Broadcasting Unknown Server (BUS), the destination address is

A. fixed

B. known

C. Variable

D. unknown

MCQ 15: Application Adaptation Layer (AAL) can accept continuous bit streams and break them into chunks to be encapsulated into a cell at the

A. ATM Layer

B. Linear Layer

C. Data Layer

D. Transport Layer

MCQ 16: ATM technology supports different types of connections between

A. two end users

B. A number of Organizations

C. Worldwide

D. All of above

MCQ 17: Asynchronous Transfer Mode (ATM) is the cell relay protocol adopted by the

A. ANSI

B. IEEE

C. ISSS

D. ITU-T

MCQ 18: Data communications had been based on frame switching and frame networks at data link layers, before

A. ATM

B. LMI

C. SONET

D. Frame Relay

MCQ 19: ATM LAN architecture is of

A. 2 types

B. 3 types

C. 4 types

D. 5 types

MCQ 20: A cell network can handle real-time transmissions e.g.

A. A video call

B. A phone call

C. A TV program

D. All of above

MCQ 21: Asynchronous Transfer Mode (ATM) technology was originally designed as a

A. LAN Technology

B. WAN Technology

C. DSL Technology

D. IP Technology

MCQ 22: WAN technologies are used in DSL, cable TV and

A. A-Lines

B. X-Lines

C. T-Lines

D. Z-Lines

MCQ 23: Frame Relay does not provide flow or error control, they must be provided by the

A. Lower Level Protocol

B. Application Level Protocol

C. Upper Level Protocol

D. Session Level Protocol

MCQ 24: The Simple and Efficient Adaptation Layer (SEAL) is another name of

A. AAL1

B. AAL2

C. AAL3/4

D. AAL5

MCQ 25: The first 4-bit field of header in segmentation and reassembly sub layer defines a sequence number to order the bits, is called

A. Serial number

B. Channel identifier

C. Length indicator

D. Sequence number

MCQ 26: The parity bit of the Sequence number protection field of the header in SAR sublayer is used to detect the errors over

A. 8 bits

B. 7 bits

C. 6 bits

D. 5 bits

MCQ 27: There are two sub-layers in

A. PVC

B. ATM

C. AAL

D. SVC

MCQ 28: Frame Relay deploys physical layer carriers such as

A. ADMs

B. UPSR

C. BLSR

D. SONET

MCQ 29: In Asynchronous Transfer Mode (ATM), the network to network interfaces are used to connect the

A. Cells

B. Frames

C. Endpoints

D. Switches

MCQ 30: At the data link layer, Frame Relay uses

A. Complex Protocol

B. Multiple Protocols

C. Simple Protocol

D. Frame Protocol

MCQ 31: In Frame Relay, there is no specific protocol defined for the

A. Physical Layer

B. Network Layer

C. Transport Layer

D. Data Link Layer

MCQ 32: The application adaptation layer (AAL) was designed to enable

A. two ATM concepts

B. two ATM Frame

C. two ATM coordinate

D. Similar ATM circuits

MCQ 33: A cell switched network is called

A. SONET

B. Frame Relay

C. ATM

D. DSH

MCQ 34: Types of connections used by Asynchronous Transfer Mode (ATM), are

A. SVC and PVC

B. PVC and TDM

C. TDM and SVC

D. SVC and CDM

MCQ 35: EA stands for

A. Expired Address

B. Extended Address

C. External Address

D. Exercised Address

MCQ 36: A field in CS of the AAL 5 that is used for error control for the entire data unit is

A. Length-error field

B. CRC field

C. User-to-user field

D. Common part identifier field

MCQ 37: In the connection less protocol, there is no

A. Connection establishment

B. no flow control phase

C. Connection termination phase

D. Both A and C

MCQ 38: If address field of a Frame Relay frame is 101100000101001, this is

A. Not Valid

B. valid

C. Both A and B

D. None

MCQ 39: The field value of the Common Part Identifier (CPI) in the Convergence Sublayer, is

A. 2

B. -1

C. 0

D. 1

MCQ 40: In switching, routes requires the whole

A. Address

B. Frames

C. Information

D. Identifier

MCQ 41: The layer provides routing, traffic management, switching and multiplexing service is called

A. Linear Layer

B. Low Layer

C. High Layer

D. ATM layer

MCQ 42: FRADs stands for

A. Frame Relay assessor/dissector

B. Frame Relay assembler/disassembler

C. Frame Relay allocator/de-allocator

D. Frame Relay assigner/designer

MCQ 43: The Convergence Sublayer (CS) header and trailer consist of six fields, in layer

A. AAL1

B. AAL2/3

C. AAL3/4

D. AAL5

MCQ 44: The Segmentation and Reassembly (SAR) sublayer of the AAL 2 has only 1 field i.e.

A. Synchronization field

B. Number protection field

C. Start field

D. Header error control Fiels

MCQ 45: length indicator is used to find

A. Initial packet

B. final packet

C. Nature of packet

D. Both B and C

MCQ 46: The 8-bit Channel Identifier field of the Convergence Sublayer (CS) defines the channel of the short

A. Packet

B. Switch

C. Field

D. Route

MCQ 47: The Discard Eligibility (DE) bit indicates the priority level of

A. Frame

B. Network

C. Data

D. Protocol

MCQ 48: An approach called Local Area Network Emulation (LANE) solves the problems of

A. ATM

B. ATM LAN

C. ATM WAN

D. ATM MAN

MCQ 49: The 2-bit identifier in SAR sublayer of the AAL 3/4 that specifies the position of the segment in the message, is

A. Segment type

B. Sequence number type

C. Multiplexing identifier

D. CRC.

MCQ 50: Some organizations were using X.25 (a virtual-circuit switching network) performed switching at the

A. Network Layer

B. Linear Layer

C. SONET Layer

D. UPSR Layer

MCQ 51: Frame Relay operates only at

A. Data link layers

B. Application layer

C. physical layer

D. both a and c

MCQ 52: The user access devices in Asynchronous Transfer Mode (ATM) is known as

A. Endpoints

B. Virtual Points

C. Nodes

D. Transmitting points

MCQ 53: Frame Relay is designed to overcome the drawbacks of the T-1 to T-3 line and

A. ADMs

B. X.25

C. SONET

D. BLSR

MCQ 54: Ethernet is a

A. Unicasting protocol

B. Multicasting protocol

C. broadcasting protocol

D. Both B and C

MCQ 55: A virtual-circuit switching network X.25 was designed in the

A. 1970s

B. 1980s

C. 1990s

D. 2000

MCQ 56: The Backward Explicit Congestion Notification (BECN) bit is set to indicate a congestion problem in

A. Data

B. Protocol

C. Frames

D. Network

MCQ 57: There are three types of switching: circuit switching, packet switching and

A. Message Switching

B. Cross Switching

C. Frame Switching

D. None of above

MCQ 58: In Asynchronous Transfer Mode (ATM), the endpoints are connected through a

A. Virtual path Interfaces

B. User-to-network interface

C. Network-to-network interfaces

D. Network-to-user interfaces

MCQ 59: The Convergence Sublayer (CS) in Application Adaptation Layer 2 (AAL2) overhead consists of

A. two fields

B. three fields

C. four fields

D. five fields

MCQ 60: Frame Relay Assembler/Disassembler (FRAD) can be implemented as a separate device or as part of a

A. Frame

B. Gateway

C. Switch

D. Protocol

MCQ 61: Permanent Virtual Circuits (PVC) connections have two

A. Advantages

B. Drawbacks

C. Functions

D. All of above

MCQ 62: In the LAN Emulation server (LES), the software is installed on the

A. LES

B. LECS

C. BUS

D. LEC

MCQ 63: The Segmentation and Reassembly sublayer of the Application Adaptation Layer 1 has two fields of

A. header

B. footer

C. cells

D. segments

MCQ 64: ATM technology supports different types of connections between two

A. Stations

B. Switches

C. End Users

D. Packages

MCQ 65: The protocols recognized by the ANSI is supported by

A. Data Relay

B. Linear Relay

C. Switched Relay

D. Frame Relay

MCQ 66: The LAN emulation configuration server (LECS) is used for the initial connection between the client and

A. LAN

B. ATM

C. LANE

D. ATM LAN

MCQ 67: Asynchronous Transfer Mode (ATM) uses asynchronous

A. FDM

B. CDM

C. TDM

D. CDMA

MCQ 68: All ATM stations have

A. Broadcast/Unknown Server

B. LAN Emulation Server

C. LAN Emulation Configuration Server

D. LAN emulation client

MCQ 69: Frame Relay operates in

A. transport and session layers

B. data link and network layers

C. physical and data link layers

D. network and transport layer

MCQ 70: To allow ATM to connect existing digital telephone networks such as voice channels and T lines, we use

A. AAL

B. AAL 1

C. AAL 2

D. AAL 3

MCQ 71: A Transmission Path (TP) is the physical connection between an endpoint and a

A. Node

B. Cell

C. Switch

D. User

MCQ 72: The protocol that is added recently to the Frame Relay protocol to provide more management features is called

A. Local Management Information

B. Frame Relay assembler/disassembler

C. Quality of Service

D. Congestion Control

MCQ 73: In ATM, if none of the channels has cell to send then the slot is

A. Constant Code Keying

B. Bits of 1

C. Alternative Bits of 0,1

D. empty

MCQ 74: To route data from one endpoint to another, the virtual connections need to be identified in

A. Virtual Current Nodes

B. Virtual Circuit Network

C. Virtual Cell Network

D. Virtual Coordinated Nodes

MCQ 75: The value of the Ending tag in the Convergence Sub layer (CS) of AAL3/4) is the same as the

A. Align tag

B. Length tag

C. Buffer tag

D. Begin tag

MCQ 76: In a mixed architecture, a station connected to a legacy LAN must be able to communicate with a station directly connected to an ATM switch is called

A. Unicasting delivery

B. broadcasting delivery

C. Multicasting delivery

D. Interoperability

MCQ 77: In cell network, a cell is a small data unit of

A. fixed size

B. variable size

C. No Size

D. None of above

MCQ 78: Mobile telephony is an example of

A. AAL5

B. AAL3/4

C. AAL2

D. AAL1

MCQ 79: PVC stands for

A. Permanent Virtual Circuits

B. Permanent Virtual Cells

C. Permanent Virtual Communication

D. Permanent Virtual Connection

MCQ 80: Frame Relay was originally designed to provide

A. VOFR Connection

B. PVC Connection

C. Protocol Connections

D. Data Connections

MCQ 81: Frame Relay has error detection at the

A. Transport Layer

B. Physical Layer

C. Data Link Layer

D. Network Layer

MCQ 82: In Application Adaptation Layer (AAL), the payload must be segmented into

A. 54 Byte Segment

B. 64 Byte Segment

C. 44 Byte Segment

D. 48 Byte Segment

MCQ 83: The high data rate of SONET's carrier reflects the design and philosophy of

A. CDM

B. TDM

C. ATM

D. PVC

MCQ 84: Asynchronous Transfer Mode (ATM) can be the superhighway of

A. Node Connections

B. Communications

C. Coordinates

D. Current Cells

MCQ 85: The last bit of the Sequence number protection field of the header in Segmentation and Reassembly (SAR) sublayer is a

A. bit for synchronization

B. bit for flow control

C. parity bit

D. protection bit

MCQ 86: AT the data link layer, Frame Relay uses

A. Frame Relay

B. SONET

C. DSH

D. WAN

MCQ 87: In the Legacy ATM LANs, when two stations on two different LANs need to exchange data, they can go through a converting device that changes the

A. Cell format

B. Switch format

C. Frame format

D. Segment format

MCQ 88: The two endpoints in Asynchronous Transfer Mode (ATM) are connected through

A. transmission path

B. virtual paths

C. virtual circuits

D. All of above

MCQ 89: A cell is the basic Data Unit in

A. PVC

B. SONET

C. ATM

D. Frame Relay Network

MCQ 90: The field value in CS of AAL3/4 that is repeated in each cell to identify all the cells belonging to the same packet is

A. Begin tag

B. Align tag

C. Flow sequence Tag

D. Length tag

MCQ 91: SVC stands for

A. Switched Virtual Connection

B. Switched Virtual Circuit

C. Switched Virtual Cells

D. Switched Virtual communication

MCQ 92: The second 4-bit field of header in Segmentation and Reassembly (SAR) sub layer is used to protect the

A. Channel identifier

B. sequence number field

C. pay load field

D. Fragmentation

MCQ 93: The drawbacks of the WAN by leasing T-l or T-3 lines are

A. overloaded and costly

B. low data rate and burst data

C. minimum space and fixed data rate

D. costly and fixed data rate

MCQ 94: Before Asynchronous Transfer Mode (ATM), the different frame networks are

A. Fast and expensive

B. Slow and expensive

C. Fast and Inexpensive

D. slow and Inexpensive

MCQ 95: The field that defines the type of packet in the Convergence Sub layer (CS) is called

A. Header control

B. User-to-user indicator

C. Length indicator

D. Packet payload type

MCQ 96: X.25 has a data rate of

A. 32-kbps

B. 64-kbps

C. 68-kbps

D. 92-kbps

MCQ 97: In the pure ATM LANs, stations can exchange data at one of two standard rates of ATM technology i.e. 155 and

A. 652 Mbps

B. 750 Mbps

C. 850 Mbps

D. 900 Mbps

MCQ 98: The Application Adaptation Layer 2 (AAL2) is used for

A. high bit rate traffic

B. low bit rate traffic

C. Static rate traffic

D. All of above

MCQ 99: If there is not much information to transmit, much of the field goes unused in

A. frame relay

B. ATM

C. Frame Networks

D. SONET

MCQ 100: The SAR sublayer of the AAL 3/4 has header and trailer consist of

A. six fields

B. five fields

C. four fields

D. three fields

MCQ 101: Frame Relay was designed in the late

A. 1970s

B. 1980s

C. 1990s

D. 2000

MCQ 102: The bit which indicates the priority level of the frame is called

A. Extended address

B. Address (DLCI) field

C. command/response

D. Discarded Eligibility

MCQ 103: The original design of Asynchronous Transfer Mode (ATM) was based on

A. TDM

B. SONET

C. Cells

D. Frames

MCQ 104: The first bit of the header field in Segmentation and Reassembly (SAR) sublayer is used for

A. Sequencing

B. Error Correction

C. timing

D. Flow control

MCQ 105: A virtual circuit is identified by a number called a data link connection identifier (DLCI) in

A. Transport Layer

B. ATM

C. Protocol

D. Frame Relay

MCQ 106: In the pure ATM LANs, the source and destination address are changed into

A. Start to Pause tag

B. Start and End tag

C. VPI and VCI

D. End to end tag

MCQ 107: A virtual-circuit switching network X.25 has a data rate of

A. 84 Kbps

B. 74 Kbps

C. 64 Kbps

D. 54 Kbps

MCQ 108: An approach that allows stations in a mixed architecture to communicate with one another is known as

A. ATM WAN

B. ATM MAN

C. LAN Emulation (LANE)

D. ATM LAN

MCQ 109: The technology that can be easily adapted for expansion in an organization is

A. ATM

B. ATM LAN

C. ATM WAN

D. ATM MAN

MCQ 110: The designers of Asynchronous Transfer Mode (ATM) wanted to maximize the

A. Cost

B. Availability

C. Data rates

D. Data rates and speed

MCQ 111: SAR stands for

A. Segmentation and rotator

B. Segmentation and reassembly

C. Segmentation and relay frames

D. Segmentation and Routers

MCQ 112: SN stands for

A. Sequence nodes

B. Sequential Numeric

C. Sequence number

D. None of above

MCQ 113: VCIs in Frame Relay are called

A. SVC

B. PCIs

C. DLCIs.

D. PVC

MCQ 114: If the segment in SAR sublayer of the AAL 3/4 is in beginning then segment type has the value of

A. 11

B. 10

C. 1

D. 0

Chapter 30

Wired LANs: Ethernet Multiple Choice Questions

MCQ 1: The field of the MAC frame that alerts the receiver and enables it to synchronize is known as

A. SFD

B. preamble

C. source address

D. destination address

MCQ 2: The maximum length of 1000BaseSX is

A. 550 m

B. 25 m

C. 100 m

D. 5000 m

MCQ 3: 1000Base-LX has used two wires for long wave are

A. STP Cable

B. UTP Cable

C. Fiber Optic

D. Coaxial Cable

MCQ 4: Protocol Data Unit (PDU) is similar to

A. LLC

B. HDLC

C. MAC

D. DSAP

MCQ 5: The terms that control the flow and errors in full duplex switched Ethernet is called

A. LLC Sub layer

B. MAC Sub layer

C. LLC Control Layer

D. MAC Control Layer

MCQ 6: In 10Base2, the cable is

A. Thick

B. Thin

C. Twisted Pair

D. None of above

MCQ 7: Preamble contains

A. 6 Bytes

B. 4 Bytes

C. 2 Bytes

D. 7 Bytes

MCQ 8: The maximum length of optical fiber in 10BaseF is

A. 100 meter

B. 185 meters

C. 500 meter

D. 2000 meter

MCQ 9: A destination address can be

A. Unicast

B. multicast

C. broadcast

D. All of above

MCQ 10: In Ethernet frame, both destination and sender addresses are of length

A. 1 Byte

B. 2 Bytes

C. 4 Bytes

D. 6 Bytes

MCQ 11: In 100BaseT4 the total number of wires are

A. 2

B. 4

C. 6

D. 8

MCQ 12: The original Ethernet was created in

A. 1980

B. 1976

C. 1960

D. 1967

MCQ 13: The Ethernet frame contains

A. 3 Fields

B. 5 Fields

C. 7 Fields

D. 9 Fields

MCQ 14: The Computer Society of the IEEE started a project named project 802 in

A. 1970

B. 1975

C. 1980

D. 1985

MCQ 15: NIC stand for

A. Network Interface Card

B. National Internet code

C. Network Isolated card

D. Network international code

MCQ 16: A source address is always a

A. Unicast

B. Multicast

C. Broadcast

D. None of above

MCQ 17: In gigabit Ethernet three or more stations are connected by

A. Ring Topology

B. Bus Topology

C. Star Topology

D. Mesh Topology

MCQ 18: The term that is used to set standards to enable intercommunication among equipment from a variety of manufacturers is called

A. Project 802

B. Project 8802

C. Project 2088

D. Project 208

MCQ 19: In 10Base5, the maximum length of the coaxial cable is

A. 10 meter

B. 250 meter

C. 500 meter

D. 5000 meter

MCQ 20: IEEE Standard was adopted by the

A. ISO

B. ANSI

C. OSI

D. None of above

MCQ 21: Media access control is the sub layer of

A. LLC

B. IEEE

C. ANSI

D. both a and c

MCQ 22: The minimum frame length for 1O-Mbps Ethernet is 64 bytes and the maximum is

A. 500 bytes

B. 1000 bytes

C. 1520 bytes

D. 1518 bytes

MCQ 23: In half duplex mode of MAC sublayer the stations are connected via

A. Switch

B. Hub

C. Bridge

D. Bus

MCQ 24: Fast Ethernet can transmit data at the rate of

A. 50 mbps

B. 100 mbps

C. 150 mbps

D. 200 mbps

MCQ 25: In the full duplex mode of gigabit Ethernet, there is no

A. attenuation

B. Frame Bursting

C. Collision

D. carrier extension

MCQ 26: In standard Ethernet, data is converted to a digital signal using the

A. NRZ Scheme

B. NRZ - L

C. NRZ - I

D. Manchester Scheme

MCQ 27: 10BaseT is used to connect the stations by using

A. Star Topology

B. Bus Topology

C. Ring Topology

D. Mesh Topology

MCQ 28: Three different encoding schemes were used for all the implementations in

A. Standard Ethernet

B. fast Ethernet

C. Gigabit Ethernet

D. 10 Gigabit Ethernet

MCQ 29: By using fast Ethernet two stations are connected via

A. point to point

B. Switch

C. Hub

D. Bridge

MCQ 30: The original Ethernet has gone through

A. only one generation

B. two generations

C. three generation

D. four generations

MCQ 31: Acknowledgments of the frames must be implemented at the

A. Lower Layers

B. Sub Layers

C. Higher Layers

D. All of above

MCQ 32: The line encoding scheme that is used in 1000BaseCX is

A. Manchester

B. NRZ

C. 4D-PAMS

D. MLT-3

MCQ 33: The sublayer of data link layer that frames the data received from upper layer is called

A. MAC Layer

B. Data Link Layer

C. Control Sub Layer

D. MAC Control Layer

MCQ 34: CRC field is used to show the

A. Error Correction

B. Sender address

C. receiver address

D. error detection information

MCQ 35: The term that is used to raise the bandwidth and separate collision domains are called

A. Switch Ethernet

B. Bridge

C. Hub Ethernet

D. None of above

MCQ 36: In multicast the relationship between the sender and receiver is

A. one to one

B. one to many

C. many to one

D. many to many

MCQ 37: The maximum length of 10GBase-L in gigabit Ethernet implementation is

A. 100 m

B. 300 m

C. 10 km

D. 40 km

MCQ 38: There is no need for CSMA/CD in

A. Duplex Mode

B. Half Duplex Mode

C. Quarter Duplex

D. Full Duplex

MCQ 39: Header plus trailer of Ethernet is

A. 12 Bytes

B. 14 Bytes

C. 16 Bytes

D. 18 Bytes

MCQ 40: The minimum length of data in Ethernet frame is

A. 64 Bytes

B. 46 Bytes

C. 1500 Bytes

D. 1518 Bytes

MCQ 41: Gigabit Ethernet has a data rate of

A. 100 Mbps

B. 1000 Mbps

C. 1500 Mbps

D. 2000 Mbps

MCQ 42: In IEEE Project 802, the Logic Link Control (LLC) is used to control and handle the

A. errors

B. flow

C. frames

D. All of above

MCQ 43: Round trip time and time required to send the jam sequence is called the

A. frame slots

B. Propagation time

C. Maximum length

D. slot time

MCQ 44: The latest Ethernet standard is Ten-Gigabit Ethernet operates at

A. 2 Gbps

B. 6 Gbps

C. 8 Gbps

D. 10 Gbps

MCQ 45: The block encoding increases the bit rate from

A. 75 to 100 mbps

B. 100 to 125 mbps

C. 125 to 150 mbps

D. 150 to 175 mbps

MCQ 46: NIC provides an Ethernet station with physical address of

A. 2 bytes

B. 4 bytes

C. 6 bytes

D. 8 bytes

MCQ 47: The flag of the Start frame delimiter (SFD) is

A. 111000011

B. 10101011

C. 10010011

D. 11011011

MCQ 48: 10Base5 is a

A. Thin Ethernet

B. Thick Ethernet

C. Twisted Pair cable

D. Fiber

MCQ 49: 10 Gigabit Ethernet operates only in

A. Duplex Mode

B. Half Duplex Mode

C. Quadratic Duplex Mode

D. Full Duplex Mode

MCQ 50: The MAC sublayer frames the data received from upper layer and passes them to the

A. Data Link Layer

B. Physical layer

C. Network Layer

D. Transport Layer

MCQ 51: In 10Base2, the maximum length of coaxial cable is

A. 10 meter

B. 100 meter

C. 185 meter

D. 500 meter

MCQ 52: Logic Link Control (LLC) defines a

A. Protocol Data Unit

B. Destination Service Access Point

C. Source Service Access Point

D. High-level Data Link Control

MCQ 53: Fast Ethernet has a data rate of

A. 100 Mbps

B. 50 Mbps

C. 560 Mbps

D. 700 Mbps

MCQ 54: The mode of propagation of data in 10GBase-E is

A. Single mode

B. Double mode

C. Multi mode

D. None of the given

MCQ 55: Gigabit Ethernet is also known as the

A. Standard 802.3u

B. Standard 802.3z

C. Standard 802.3s

D. Standard 802.3y

MCQ 56: Fast Ethernet was designed to compete with

A. LAN protocols

B. WAN protocol

C. MAN protocol

D. None

MCQ 57: The data link layer in the IEEE standard is divided into two sub layers of

A. MAC and ACKs

B. LAN and MAC

C. LLC and NLC

D. LLC and MAC

MCQ 58: The maximum length of 100BaseTX is

A. 100 meter

B. 200 meter

C. 300 meter

D. 400 meter

MCQ 59: 100BaseFX is used for the encoding of

A. Manchester

B. NRZ - I

C. MLT-3

D. 8B/6T

MCQ 60: Fast Ethernet also called

A. Standard 802.3u

B. Standard 802.3z

C. Standard 802.3s

D. Standard 802.3y

MCQ 61: The number of wires used in 1000BaseT are

A. 2

B. 4

C. 6

D. 8

MCQ 62: By using bridge, the collision is

A. Reduced

B. Increased

C. Eliminated

D. diversified

MCQ 63: The preamble is actually added at the

A. Physical layer

B. Data Link layer

C. Logic layer

D. All of above

MCQ 64: Address is unicast, if the least significant bit of the first byte is

A. 0

B. 1

C. -1

D. infinity

MCQ 65: The Logic Link Control provides one single data link control protocol for all IEEE

A. Metropolitan Area Networks

B. Wide Area Networks

C. Local Area Networks

D. Wireless Networks

MCQ 66: 100BaseTX uses two pairs of

A. twisted cable

B. fiber optic

C. coaxial cable

D. None of above

MCQ 67: Fast Ethernet address contains

A. 46 bits

B. 48 bits

C. 54 bits

D. 64 bits

MCQ 68: The slot time for gigabit Ethernet is

A. 0.312

B. 0.412

C. 0.512

D. 0.612

MCQ 69: Maximum length of Ethernet frame is

A. 512 bits

B. 46 Bits

C. 12144 Bits

D. 56 Bits

MCQ 70: In most transmission media, the signal propagates at

A. $2 X 10^2$

B. $2 X 10^4$

C. $2 X 10^6$

D. $2 X 10^8$

MCQ 71: The half duplex mode of gigabit Ethernet approach uses

A. CSMA/CD

B. CSMA/CA

C. FDMA

D. TDMA

Chapter 31

Wireless LANs Multiple Choice Questions

MCQ 1: The control frame that is sent by the destination station is called

A. clear to send

B. Request to sent

C. Distributed Interframe Space

D. Short Interframe Space

MCQ 2: The field retry means retransmitting frame when its value is set to

A. 0

B. 1

C. -1

D. infinity

MCQ 3: IEEE 802.11 have three categories of

A. frames

B. fields

C. signals

D. sequences

MCQ 4: The access method of baseband layer is

A. FDMA

B. TDMA

C. FSK

D. CDMA

MCQ 5: A BSS without an AP is called an

A. adhoc network

B. infrastructure network

C. connectionless network

D. channelization network

MCQ 6: Bluetooth defines several protocols for the upper layers that uses

A. UDP

B. L2CAP

C. HSP

D. ITP

MCQ 7: Peripheral devices can communicate through a small network, known as

A. Wireless Network

B. Bluetooth Network

C. Adhoc Network

D. Piconet Network

MCQ 8: in Point Coordination Function, PCF Interframe space (PIFS) is shorter than the

A. RTS

B. SIFS

C. DIFS

D. CTS

MCQ 9: Bluetooth allows the station to define a quality of

A. Time Level

B. Service Level

C. Data Level

D. Segment Level

MCQ 10: ACL stands for

A. Asynchronous Connectionless Link

B. Asynchronous Connection Link

C. Asynchronous Connected Link

D. Asynchronous Communication Link

MCQ 11: DCF stands for

A. Direct Control Function

B. Distributed Control Function

C. Direct Cooperate Function

D. Distributed Coordination Function

MCQ 12: Distributed Coordination Function (DCF) uses the mechanism of

A. CSMA/CD

B. CSMA/CA

C. TDMA

D. FDMA

MCQ 13: The current version in frame control field is

A. 0

B. 1

C. 2

D. 3

MCQ 14: Management frames, control frames and data frames are used by

A. Wireless LANs

B. Wireless MANs

C. Wireless WANs

D. None

MCQ 15: If the value of sub field type is 1100 in control frames, then it contains the information of

A. Request to send

B. Clear to send

C. Acknowledgement

D. Sender

MCQ 16: Each station can send data without the need to since line is

A. full duplex Ethernet

B. half duplex Ethernet

C. both

D. None

MCQ 17: The addressing mechanism of the Bluetooth can include up to

A. 2 Addresses

B. 4 Addresses

C. 6 Addresses

D. 8 Addresses

MCQ 18: In Bluetooth LAN, the devices are called

A. Nodes

B. Gadgets

C. Piconet

D. Entity

MCQ 19: If piconet has only one secondary station, the TDMA operation is very

A. Complicated

B. Complexed

C. Simple

D. Small

MCQ 20: The exact range of Bluetooth devices are

A. 10 m

B. 20 m

C. 30 m

D. 40 m

MCQ 21: In TDMA, the primary and secondary devices communicate with each other using

A. Full-duplex mode

B. Half-Duplex mode

C. Multilevel mode

D. Multimode

MCQ 22: Each channel in Bluetooth layer is of

A. 1 MHz

B. 2 MHz

C. 3 MHz

D. 4 MHz

MCQ 23: For a I-Mbps data rate, the 16 Bit sequence in which only first bit is set to 1 and the rest are

A. 0

B. 1

C. -1

D. 2

MCQ 24: Point Coordination Function (PCF) is implemented in an

A. infrastructure network

B. adhoc network

C. distributed network

D. cellular network

MCQ 25: A Bluetooth LAN is an

A. Adhoc Network

B. infrastructure Signals

C. Adhoc signals

D. infrastructure LAN

MCQ 26: The Media Access Control layer frame has

A. 5 Fields

B. 7 Fields

C. 9 Fields

D. 11 Fields

MCQ 27: IEEE 802.11 defines the basic service set as the building block of a wireless

A. LAN

B. WAN protocol

C. MAN

D. All of above

MCQ 28: A Bluetooth network is called

A. Wireless Network

B. WAN

C. Piconet

D. LAN

MCQ 29: The term in which a station can move from one basic service set to another is called

A. BSS transition mobility

B. ESS transition mobility

C. No transition mobility

D. None of above

MCQ 30: In field control frames, there are four address in which address 1 is always the address of

A. Next device

B. Previous device

C. Final destination

D. Original source

MCQ 31: In IEEE 802.11 DSSS, infrared sequence is mapped into a

A. 12 Bit Sequence

B. 14 Bit Sequence

C. 16 Bit Sequence

D. 18 Bit Sequence

MCQ 32: In wireless LAN, there are many hidden stations so we cannot detect the

A. Frames

B. Collision

C. Signal

D. Data

MCQ 33: In IEEE 802.11 frames, To DS and from DS define the value of the two flags in the

A. Sequence field

B. Data field

C. Frame control field

D. Duration field

MCQ 34: The header of the baseband layer frame has three identical sections of

A. 12 Bits

B. 16 Bits

C. 18 Bits

D. 20 Bits

MCQ 35: When a station is idle, it waits for the period of time is called

A. Distributed Interframe Space

B. Short Interframe Space

C. Request to sent

D. clear to send

MCQ 36: When we divide the band of Orthogonal Frequency Division Multiplexing (OFDM) into sub bands, it diminishes the effects of

A. Noise

B. Collision

C. Interference

D. Signals absence

MCQ 37: The baseband is roughly equivalent to the MAC sub layer in

A. WANs

B. LANs

C. MANs

D. Wi-Fi

MCQ 38: L2CAP have specific duty of

A. multiplexing

B. quality of service

C. segmentation and reassembly

D. All of above

MCQ 39: The value of the frame body field of Media Access Control frame is in between

A. 0 and 512 bytes

B. 0 and 1214 bytes

C. 0 to 2312 bytes

D. 0 to 3450 bytes

MCQ 40: QoS stands for

A. Quality of service

B. Quantity of signals

C. Quality of signals

D. Quantity of segments

MCQ 41: The duration field D of Media Access Control layer frame contains

A. 2bytes

B. 4 bytes

C. 6 bytes

D. 8 bytes

MCQ 42: Bluetooth has used a sophisticated version of

A. CSK

B. FSK

C. TDMA

D. CDMA

MCQ 43: The Clear To Send frame in CSMA/CA handshake can prevent from

A. Data overlap

B. Distort signals

C. Frames overlap

D. Collision

MCQ 44: The access method used in the point coordination function (PCF) MAC sub layer is

A. piconet

B. polling

C. handshaking period

D. extended service set

MCQ 45: IEEE 802.11 Direct Sequence Spread Spectrum (DSSS) uses the data rate of

A. 1 or 2 Mbps

B. 6 to 54 Mbps

C. 5.5 and 11 Mbps

D. 2 and 54 Mbps

MCQ 46: The length of a time slot is exactly same as the

A. Sender Time

B. Receiver Time

C. Modulator Time

D. Dwell Time

MCQ 47: In multiple-secondary, process is a little more involved if there is more than one secondary in

A. Adhoc Network

B. Piconet

C. Infrastructure Net

D. Small Net

MCQ 48: ESP stands for

A. Exposed Status Problem

B. Exposed Solution Point

C. Exposed Signal Point

D. Exposed Station Problem

MCQ 49: When the destination station has received the frame then it sends an

A. request

B. signal

C. acknowledgment

D. access point

MCQ 50: An adhoc network cannot send data to other

A. Basic service set

B. Extended service set

C. Access point

D. Distributed function

MCQ 51: In IEEE 802.11 frames, when the values of, To DS and from DS are 00, its means the frame is not going to a

A. Adhoc System

B. Infrastructure system

C. Distribution System

D. cellular System

MCQ 52: CCK Stands for

A. Constant Code Keying

B. Complementary Constant Keying

C. Complementary Code Keying

D. Constant Complementary Keying

MCQ 53: The frame of the Media Access Control (MAC) layer consists of

A. 9 fields

B. 7 fields

C. 5 fields

D. 3 fields

MCQ 54: The contention free end frame is used to allow the contention-based stations to use the

A. signals

B. data

C. medium

D. All of above

MCQ 55: Bluetooth network consists of one primary device and up to

A. 5 Devices

B. 7 Devices

C. 9 Devices

D. 11 Devices

MCQ 56: IEEE 802.11 Infrared uses the Infrared light in the range of

A. 800 to 950

B. 750 to 850

C. 650 to 750

D. 550 to 650

MCQ 57: If the value of sub field type is 01 in frame control then it contains the information of

A. management

B. data

C. control

D. reserve

MCQ 58: The wireless environment is very

A. smooth

B. efficient

C. Both A&C

D. Noisy

MCQ 59: In collision during handshaking, sender assumes that the collision in frames, is because it has not received a

A. SIFS

B. DIFS

C. RTS

D. CTS

MCQ 60: Access Code of Bluetooth frame is of

A. 54 Bits

B. 64 Bits

C. 72 Bits

D. 84 Bits

MCQ 61: The bandwidth of Bluetooth devices are

A. 4.2 GHz

B. 3.2 Ghz

C. 2.4 GHz

D. 2.3 GHz

MCQ 62: When basic service points are connected, the station within reach can communicate without the use of an

A. Adhoc network

B. Infrastructure network

C. stationary station

D. Access point

MCQ 63: IEEE 802.11 Frequency-Hopping Spread Spectrum (FHSS) uses the Band rate of

A. 2.4 GHz

B. 5.75 GHz

C. 5.725 GHz

D. 2.9 GHz

MCQ 64: A Frame in the baseband layer can be of

A. 1 Type

B. 2 Types

C. 3 Types

D. 4 Types

MCQ 65: In IEEE 802.11 frames, when the values of, To DS and from DS are 11, its means the distribution system is

A. Local Area Network

B. Wireless Area Network

C. Metropolitan Network

D. None of the given

MCQ 66: HEC field in Bluetooth data frame is used for

A. Error detection

B. Error Correction

C. Data Flow

D. Propagation delay

MCQ 67: The data rate of Bluetooth is

A. 4 Mbps

B. 3 Mbps

C. 2 Mbps

D. 1 Mbps

MCQ 68: A set that makes stationary or mobile wireless station and also have optional central base station is known as

A. Basic service set

B. Extended service set

C. Network point set

D. Access point

MCQ 69: The special control frame that is used in the repetition interval is called

A. Network Frame

B. Beacon Frame

C. Request Frame

D. Send Frame

MCQ 70: IEEE 802.11 covers the physical layer and

A. Network layer

B. Data link layer

C. Session layer

D. Transport layer

MCQ 71: The term that is used to show the exchange of data and control frames in time is called

A. Process Flow Chart

B. Distributed Coordination Function

C. Frame exchange timeline

D. Point coordination function

MCQ 72: The common data rates of IEEE 802.11 OFDM are

A. 18 Mbps

B. 20 Mbps

C. 50 Mbps

D. 54 Mbps

MCQ 73: The payload subfield of baseband layer frame can be up to 0 to 2740 Bits

A. Small

B. Short

C. Cubic

D. Long

MCQ 74: IEEE 802.11 doesn't guarantee that communication is

A. discrete

B. Continuous

C. perpendicular

D. Vertical

MCQ 75: A Bluetooth LAN by nature, cannot be

A. Small

B. Large

C. Thin

D. Thick

MCQ 76: BSS stands for

A. Basic Signal Set

B. Basic Service Set

C. Beacon Service Set

D. Basic Strong Set

MCQ 77: The frames that are used for the initial communication between stations and access points are called

A. Control frames

B. Data frames

C. Beacon Frame

D. Management Frames

MCQ 78: A piconet network can have up to

A. 9 Station

B. 8 Station

C. 7 Station

D. 6 Station

MCQ 79: The maximum size of payload field in the baseband layer is

A. 2244 Bits

B. 2664 Bits

C. 2774 Bits

D. 2884 Bits

MCQ 80: Multiple piconets form a network called a

A. small area

B. scatter net

C. network allocation vector

D. gadgets

MCQ 81: A small net can have only one primary

A. Frame

B. Data

C. Signal

D. Station

MCQ 82: Bluetooth is a wireless

A. WAN technology

B. MAN technology

C. LAN technology

D. All of above

MCQ 83: Bluetooth technology was originally started as a project by the

A. Apple Company

B. Dell Company

C. Ericsson Company

D. Samsung Company

MCQ 84: The 4-bit type subfield of baseband layer frame defines the type of data coming from the

A. Lower Layer

B. upper layer

C. data link layer

D. Media Access Control layer

MCQ 85: Orthogonal Frequency Division Multiplexing (OFDM) is similar to

A. TDM

B. FSD

C. BPS

D. FDM

MCQ 86: The range of Bluetooth devices are

A. Low power

B. High power

C. No power

D. static power

MCQ 87: Logical Link Control and Adaptation Protocol (L2CAP) divides the large packets into

A. frames

B. data

C. segments

D. signals

MCQ 88: Modern Bluetooth is the implementation of protocol, defined by

A. IEEE 802.11 standard

B. IEEE 802.12 standard

C. IEEE 802.14 standard

D. IEEE 802.15 standard

MCQ 89: A basic service set without an access point is a standalone network called

A. Cellular Network

B. Point to point network

C. Adhoc network

D. Infrastructure network

MCQ 90: The term that refers to the time in which the Request to Send (RTS) and Clear to Send (CTS) control frames are in transition is called

A. Hand shaking period

B. Back-off time

C. Frame exchange timeline

D. timeline

MCQ 91: The modulation technique in IEEE 802.11 infrared is

A. PPM

B. PSK

C. FSK

D. QAM

MCQ 92: When the station accesses the system and send a Request to Send (RTS) frame then other stations start their

A. Point Coordination Function

B. Network allocation vector

C. Distributed Coordination function

D. clear to send

MCQ 93: When piconet networks are combined, then it forms a

A. Scatternet

B. Small Net

C. Large Net

D. Narrow Net

MCQ 94: Distributed Coordination Function (DCF) is having lower priority over

A. PCF

B. RTS

C. CTS

D. PIFS

MCQ 95: The IEEE technique, that describes the high rate direct sequence spread spectrum method for signal generation is called

A. IEEE 802.11 infrared

B. IEEE 802.11b DSSS

C. IEEE 802.11g OFDM

D. IEEE 802.11 DSSS

MCQ 96: Bluetooth devices divides the total band rate into

A. 80 Channels

B. 75 Channels

C. 79 Channels

D. 99 Channels

MCQ 97: The primary devices in single-secondary uses the even numbered slots which are

A. 6,8,10,12, . . .

B. 4,6,8,10, . . .

C. 0,2,4,6, . . .

D. 8,10,12, . . .

MCQ 98: The FCS field of Media Access Control frame contains CRC-32

A. error correction sequence

B. error detection sequence

C. flow control sequence

D. error control sequence

MCQ 99: IEEE 802.11g is backward compatible with

A. IEEE 802.11a

B. IEEE 802.11b

C. 802.11 FSFH

D. IEEE 802.12g

MCQ 100: The basic service sets are connected through a distribution system in

A. Basic service set

B. Extended service set

C. Cellular Set

D. None of above

Chapter 32

Wireless WANs: Cellular Telephone and Satellite Networks Multiple Choice Questions

MCQ 1: Data rate of the Teledesic System has is up to

A. 135 Mbps

B. 145 Mbps

C. 150 Mbps

D. 155 Mbps

MCQ 2: In North America, Advanced Mobile Phone Service (AMPS) is one of the leading cellular

A. Company

B. Generated company

C. System

D. Station

MCQ 3: Second generation of the cellular phone network was developed, to provide higher-quality mobile

A. Video Communications

B. Signal Generation

C. Frame Communication

D. Voice Communications

MCQ 4: To prevent the interference of adjacent cell signals, the size of the cell is

A. Increased

B. Expanded

C. Optimized

D. Constant

MCQ 5: In cellular telephony, for forward and reverse communication, the system uses two separate

A. Digital signals

B. Analog Systems

C. Digital Data

D. Analog Channels

MCQ 6: In cellular telephony, a service provider must be able to locate and track a

A. Signals

B. Stations

C. Media data

D. Caller

MCQ 7: Satellite Networks can divide the planet into

A. Nodes

B. Slots

C. Cells

D. Chunks

MCQ 8: Roaming is the feature of

A. Cellular Telephony

B. Cellular End-Caller

C. Cellular Frames

D. Cellular Signals

MCQ 9: Approximately the distance of Moon above the Earth is

A. 364,000 km

B. 374,000 km

C. 384,000 km

D. 394,000 km

MCQ 10: Transmission from the Earth to the satellite is called the

A. Up-link

B. Down-link

C. Low-link

D. High-link

MCQ 11: In the Global star system the orbits are located at an altitude of almost

A. 1400 Ian

B. 1200 Ian

C. 1000 Ian

D. 800 Ian

MCQ 12: GSM stands for

A. Global System for Mobile

B. Global Station for Mobile

C. Global Signal for Mobile

D. Global Station for Mobility

MCQ 13: In cellular telephony, IS 95 forward transmission, the output of the long code generator is fed to a

A. Connector

B. Protector

C. Director

D. Decimator

MCQ 14: The area which is divided into small region of cells is called

A. Cellular Service

B. Cellular Program

C. Cellular Signals

D. Cellular Stations

MCQ 15: The Global star system is similar to the

A. Iridium System

B. Meridian System

C. Bridgedway System

D. Gateway System

MCQ 16: The Mobile Switching Center (MSC) seeks a new cell that can better accommodate the communication, if the strength of the signals are

A. Strong

B. Low

C. Diminishes

D. High

MCQ 17: Global star is another satellite system of

A. GEO

B. MEO

C. LEO

D. GPS

MCQ 18: Satellites can provide transmission capability to and from any location on

A. Moon

B. Earth

C. Mars

D. Stars

MCQ 19: In 1900-MHz band, a mobile station needs more

A. Instructions

B. Power

C. Signals

D. Frames

MCQ 20: A satellite can also communicate with an Earth station through a

A. User Mobile Link

B. Gateway Link

C. Bridgeway Link

D. Station Link

MCQ 21: A Van Allen belt is a layer that contains

A. Uncharged Stations

B. Charged Stations

C. Charged Particles

D. Uncharged Particles

MCQ 22: In cellular telephony, each band is divided into

A. 832 Channels

B. 800 Channels

C. 789 Channels

D. 755 Channels

MCQ 23: The Iridium system can be used for Navigation, Voice, Fax, Paging and

A. SMS

B. GPS

C. MMS

D. DATA

MCQ 24: In cellular telephony, bands and Channels of Interim Standard 95 (IS-95) uses two bands for

A. Duplex communication

B. Traditional ISM communication

C. Digitized communication

D. Scrambled communication

MCQ 25: Orbital speed is based on the distance from the

A. Moon

B. Node

C. Planet

D. Station

MCQ 26: In 1998, the Iridium system started with

A. 35 satellites

B. 66 satellites

C. 72 satellites

D. 87 satellites

MCQ 27: The Iridium System has 66 satellites divided into

A. 9 Orbits

B. 8 Orbits

C. 7 Orbits

D. 6 Orbits

MCQ 28: Third generation of cellular telephony has a band of

A. 1 GHz

B. 2 GHz

C. 4 GHz

D. 6 GHz

MCQ 29: The L satellite frequency band has the bandwidth of

A. 10 MHz

B. 15 MHz

C. 20 MHz

D. 25 MHz

MCQ 30: The signal from a satellite is normally aimed at a specific area called the

A. Blue Print

B. Black Print

C. Polar Print

D. Foot Print

MCQ 31: To provide direct worldwide communication using handheld terminals, is the purpose of

A. Meridian

B. Iridium

C. Space Terminals

D. Beams

MCQ 32: In cellular telephony, the size of the cell is not fixed, can be increased or decreased depending on the population of

A. Signals

B. Area

C. Media Data

D. Stations

MCQ 33: In Satellite Networks, according to Kepler's law, the period of moon is

A. Period: C x distance1.3

B. Period: C x distance1.5

C. Period: C x distance1.7

D. Period: C x distance1.9

MCQ 34: The S satellite frequency band has the bandwidth of

A. 55 MHz

B. 60 MHz

C. 65 MHz

D. 70 MHz

MCQ 35: Teledesic has 288 satellites in

A. 10 polar orbits

B. 11 polar orbits

C. 12 polar orbits

D. 13 polar orbits

MCQ 36: In an artificial satellite network, the orbit travels around the

A. Earth

B. Moon

C. Mars

D. Stars

MCQ 37: In cellular telephony, Interim Standard 95 (IS-95), produces data at a basic rate of

A. 9.6 Kbps

B. 9.7 Kbps

C. 9.8 Kbps

D. 9.9 Kbps

MCQ 38: In cellular telephony transmission, a voice channel is digitized to

A. 7.5 Kbps

B. 7.50 Kbps

C. 7.85 Kbps

D. 7.95 Kbps

MCQ 39: The S satellite band has the Up-link of

A. 2.4 GHz

B. 2.2 GHz

C. 2.8 GHz

D. 2.10 GHz

MCQ 40: MEO stands for

A. Middle Earth Orbit

B. Moon Earth Orbit

C. Mars Earth Orbit

D. Misc. Earth Orbit

MCQ 41: Global Service for Mobile (GSM) uses two bands for duplex

A. Data

B. Communications

C. Signals

D. Stations

MCQ 42: In cellular telephony, channels 1 to 7 of Interim Standard 95 (IS-95) forward transmission are used for

A. Framing

B. Paging

C. traffic control

D. Packaging

MCQ 43: In Interim Standard 95 (IS-95), each channel produces data at a rate of

A. 9.2 kbps

B. 9.4 kbps

C. 9.6 kbps

D. 9.8 kbps

MCQ 44: Cellular telephony was designed to provide communications between two

A. static units

B. moving units

C. land units

D. All of above

MCQ 45: In cellular telephony, Interim Standard 95 (IS-95), the forward channel uses the technique

A. CDMA

B. DSSS

C. FHSS

D. FDMA

MCQ 46: In third generation of Cellular Telephony, the data rate for access in a moving vehicle is

A. 244 Kbps

B. 238 Kbps

C. 150 Kbps

D. 144 Kbps

MCQ 47: Global star communication requires both satellites and

A. Base Stations

B. Network Stations

C. Orbit Stations

D. Earth Stations

MCQ 48: Advanced Mobile Phone Service (AMPS) has a frequency reuse factor of

A. 9

B. 8

C. 7

D. 5

MCQ 49: Personal Communication Service (PCS) uses any second-generation

A. System

B. Devices

C. Technology

D. Links

MCQ 50: Low Earth Orbit (LEO) satellites has the rotation period of

A. 70 to 80 Min

B. 80 to 90 Min

C. 90 to 100 Min

D. 90 to 120 Min

MCQ 51: The concept of the Iridium system was initiated by

A. Siemens

B. Motorola

C. Samsung

D. Nokia

MCQ 52: A natural satellite can be used as a relaying node in the network, such as

A. Earth

B. Moon

C. Mars

D. Stars

MCQ 53: The big LEOs operate between

A. 1 to 2GHz

B. 1 to 5 GHz

C. 1 to 3 GHz

D. 1 to 7 GHZ

MCQ 54: In Low Earth Orbit (LEO) satellites, the round-trip time propagation delay is normally less than

A. 10 ms

B. 15 ms

C. 20 ms

D. 25 ms

MCQ 55: In third generation Cellular Telephony, the data rate of access is 384 Kbps for

A. Aeroplane

B. Train

C. Pedestrian

D. Car

MCQ 56: To find our exact position in space we need at least

A. Four spheres

B. Five spheres

C. Six spheres

D. Eight spheres

MCQ 57: AMPS stands for

A. American Mobile Power Station

B. Advanced Mobile Phone System

C. Advanced Modulated Phone Signals

D. Advanced Mobile Phone Stations

MCQ 58: In Interim Standard 95 forward transmission, the output of the decimator is used for

A. Signaling

B. Scrambling

C. Framing

D. Searching

MCQ 59: The atomic clock is precise and can function synchronously with each other in

A. Satellite

B. Space

C. Air

D. Earth

MCQ 60: Traffic channels in forward transmission of telephony, carrying digitized voice from the base station to the mobile stations are Channels 8 to 31 and

A. 32 to 40

B. 32 to 63

C. 32 to 60

D. 33 to 63

MCQ 61: In cellular telephony, MSs stands for

A. Multi Stations

B. Moving Stations

C. Mobile Stations

D. Module Stations

MCQ 62: In third generation of Cellular Telephony, the portable device is always

A. Connected

B. Disable

C. Enable

D. Active

MCQ 63: Third generation of Cellular Telephony, has the bandwidth of

A. 4 MHz

B. 3 MHz

C. 2 MHz

D. 1 MHz

MCQ 64: The Teledesic project was started in 1990 by

A. Bill Gates and Lewis Ireland

B. Craig McCaw and Bill Gates

C. Clifford Gray and Bill Gates

D. John Miller and David Iceland

MCQ 65: The third generation of cellular telephony refers to a combination of technologies that provides

A. Services

B. Techniques

C. Efficiency

D. All of above

MCQ 66: In cellular telephony, the Electronic Serial Number (ESN) is unique for each

A. Station

B. Module

C. Mobile

D. Frame

MCQ 67: The Global star system has used

A. 50 Satellites

B. 48 Satellites

C. 46 Satellites

D. 44 Satellites

MCQ 68: Through a roaming contract, neighboring service providers can provide

A. Extended Stations

B. Extended Coverage

C. Extended Signals

D. Extended Roaming

MCQ 69: The pilot channel that is used for the purpose of control and synchronization in Interim Standard 95 (IS-95) forward transmission is

A. Channel 0

B. Channel 32

C. Channel 7

D. Channel 18

MCQ 70: In Satellite Networks, the orbit can be equatorial, inclined, or

A. Solar

B. Sequential

C. declined

D. Polar

MCQ 71: One satellite in orbit has line-of-sight with vast number of

A. Channels

B. Stations

C. Network System

D. Nodes

MCQ 72: The technique used for the reverse channels of the Interim Standard 95 (IS-95) is

A. FDMA

B. FHSS

C. CDMA

D. DSSS

MCQ 73: In Satellite Networks, the signal power of the footprint is maximum at the

A. Corner

B. Bottom

C. Center

D. Border line

MCQ 74: Medium-Earth-orbit (MEO) satellites are positioned between the two

A. Van Data Belts

B. Data Frame Belts

C. Van Allen Belts

D. Van Allen Channels

MCQ 75: In the Iridium system, communication between two users takes place through

A. Network

B. Satellite

C. Beams

D. Orbits

MCQ 76: Digital Advance Mobile Phone Service (D-AMPS) was designed to be backward-compatible with

A. FDMA

B. AMPS

C. CDMA/CS

D. FSK

MCQ 77: In cellular telephony, communication must first be broken with the previous base station, when one cell move to another in

A. Mobile Signals

B. Mobile Switching Center

C. Mobile Station

D. Mobile Service Connection

MCQ 78: A mobile station only communicates with one base station, in a

A. Back Off

B. Hard Handoff

C. Soft Handoff

D. Low Handoff

MCQ 79: In Satellite Networks, as we move out of the footprint center, the power

A. Decreases

B. Increases

C. Remains constant

D. None of above

MCQ 80: In Global Service for Mobile (GSM), each band is divided into 124 channels of

A. 200 KHz

B. 150 KHz

C. 300 KHz

D. 250 KHz

MCQ 81: UML stands for

A. User Mobile Link

B. User Module Lift

C. User Mobile Lines

D. User Module Longitude

MCQ 82: In forward transmission of Interim Standard 95 (IS-95), for control and synchronization there are

A. 5 Channels

B. 7 Channels

C. 9 channels

D. 11 channels

MCQ 83: Personal Communication Service (PCS) offers communication service such as

A. MMS

B. SMS

C. Internet

D. GPRS

MCQ 84: GEO stands for

A. Geostationary Earth Orbit

B. Geographical Earth Orbit

C. Geostructure Element Orbit

D. Geostructure Earth Orbit

MCQ 85: The transmission technique of (IS-95) in which the communications between the base and all mobiles are synchronized in

A. Backward Direction

B. Forward Direction

C. Upward Direction

D. Downward Direction

MCQ 86: In cellular telephony, Interim Standard 95 (IS-95) has two different transmission

A. Channels

B. Modulations

C. Techniques

D. Stations

MCQ 87: In North America, the second-generation Interim standards 95 (IS-95) is based on

A. CDMA/CS

B. CDMA and DSSS

C. CDMA and FSK

D. CDMA and AMPS

MCQ 88: The position of each satellite can be calculated by a

A. MEO

B. GPS

C. LEO

D. FSK

MCQ 89: To circle the earth, Medium-Earth-orbit (MEO) satellites takes up to

A. 5-8 hrs

B. 6-8 hrs

C. 8-9 hrs

D. 5-10 hrs

MCQ 90: Global Positioning System (GPS) is a

A. Satellite WordStation

B. Satellite System

C. Satellite Signal

D. Satellite Solution

MCQ 91: A system of satellites that provides fiber-optic communication is called

A. Global star

B. Iridium constellation

C. Teledesic

D. LEO Satellites

MCQ 92: For recording all information, connecting calls and billing information, computerized system is

A. Not Required

B. Required

C. Responsible

D. Available

MCQ 93: In forward transmission of Interim Standard 95 (IS-95), the result of the scrambler is combined using

A. FSK

B. TDMA

C. CDMA

D. CDMA and AMPS

MCQ 94: In Teledesic System, Transmission occurs in the

A. La Band

B. Ja Band

C. Ka Band

D. Ks Band

MCQ 95: A mobile station can communicate with two base stations at the same time, in this case systems are using

A. Hard Handoff

B. Soft Handoff

C. Low Handoff

D. Back Handoff

MCQ 96: In 1998, the Iridium system service was started with

A. 56 Satellites

B. 66 Satellites

C. 76 Satellites

D. 86 Satellites

MCQ 97: In cellular telephony, all base channels of Interim Standard 95 (IS-95) need to be synchronized to use

A. FSK

B. TDMA

C. CDMA

D. AMPS

MCQ 98: In Satellite Networks, n orbit is essential for

A. Sequential Satellite

B. Declined Satellite

C. Artificial Satellite

D. Geosynchronous Satellite

MCQ 99: The Mobile Switching Center (MSC) transmits the ringing signals, once the mobile station is

A. Available

B. Arranged

C. Optimized

D. Found

MCQ 100: To provide a common second-generation technology for all Europe, the system was designed is

A. FDMA

B. AMPS

C. GSM

D. FSM

MCQ 101: In cellular telephony, MSC stands for

A. Module Service Center

B. Mobile Switching Center

C. Mobile Station Center

D. Mobile Service Connection

MCQ 102: To prevent its signal from interfering with other cells, the transmission power of each cell is kept

A. High

B. Low

C. Static

D. Optimized

MCQ 103: Global Positioning System (GPS) is an example of

A. GEO

B. MEO

C. LEO

D. SEO

MCQ 104: To place a call from a mobile station, the caller enters a code of

A. 5 to 7 Digit Code

B. 7 to 9 Digit Code

C. 7 to 10 Digit Code

D. 10 to 14 Digit Code

MCQ 105: A service provider usually has limited

A. Stations

B. Signals

C. Coverage

D. Frames

MCQ 106: In Iridium system, active spot beams are approximately

A. 4000

B. 3500

C. 2500

D. 2000

MCQ 107: In Teledesic System, User can communicate directly with the network using

A. Orbits

B. Terminals

C. Bridges

D. Beams

MCQ 108: In Iridium system, the system can have up to

A. 3168 beams

B. 3178 beams

C. 3188 beams

D. 3190 beams

MCQ 109: D-AMPS is a digital cellular phone system using

A. TDMA

B. FDMA

C. WMA

D. both a and b

MCQ 110: A Person should be able to talk to anyone else in the world with a voice quality similar to that of the existing fixed telephone network with a

A. Portable Interpreter

B. Portable Device

C. Portable Network

D. Portable Signals

MCQ 111: The categories of satellite are

A. 5

B. 4

C. 3

D. 2

MCQ 112: Geostationary satellite cannot cover the whole

A. Earth

B. Moon

C. Mars

D. Jupiter

MCQ 113: In Interim Standard 95 (IS-95) forward transmission, the scrambling is done to create

A. directional

B. Signals

C. Frames

D. Privacy

MCQ 114: Low Earth Orbit (LEO) satellites has a speed of

A. 10000 to 15000 Km/h

B. 15000 to 20000 Km/h

C. 20000 to 25000 Km/h

D. 25000 to 30000 Km/h

MCQ 115: When a mobile phone is called, the telephone central office sends the number to the

A. FDMA

B. MCS

C. MSs

D. MSD

MCQ 116: The L band has the Up-link of

A. 1.6 GHz

B. 1.8 GHz

C. 2.5 GHz

D. 5 GHz

MCQ 117: Satellites process microwaves with bidirectional antennas, which is

A. Line of Signals

B. Line of Sight

C. Line of Direction

D. Line of Stations

MCQ 118: In cellular telephony, voice communication using analog signals was designed for the

A. Fourth Generation

B. Third Generation

C. Second Generation

D. First Generation

MCQ 119: In Global Service for Mobile (GSM), each voice channel is digitized and compressed to a digital signal of

A. 17 Kbps

B. 19 Kbps

C. 13 Kbps

D. 15 Kbps

MCQ 120: The satellite must move at the same speed as the Earth, to ensure the constant

A. Movement

B. Stations

C. Delivery

D. Communication

MCQ 121: The scrambling signal is produced from a

A. Digitized Code generator

B. Long code generator

C. Modular code generator

D. Directed code generator

MCQ 122: Another use of GPS is in

A. Interrogation

B. Transmission

C. Synchronization

D. Navigation

MCQ 123: The Iridium System was materialize in

A. 10 Years

B. 9 Years

C. 8 Years

D. 7 Years

MCQ 124: In geostationary orbit, the satellites are used for

A. Space Navigation

B. Sea Navigation

C. Land Navigation

D. Both B&C

MCQ 125: For digitized voice communication, the second generation was mainly

A. Invented

B. Sorted

C. Designed

D. Arranged

MCQ 126: Low Earth Orbit (LEO) satellites are close to

A. Space

B. Moon

C. Air

D. Earth

MCQ 127: Each satellite of the Iridium system is at an altitude of

A. 650 Kln

B. 700 Kln

C. 750 Kln

D. 800 Kln

MCQ 128: Teledesic has

A. 40 satellites

B. 92 satellites

C. 176 satellites

D. 288 satellites

MCQ 129: The term that is used to design to provide communication in between two moving units is called

A. Cellular Stations

B. Cellular Telephony

C. Cellular Frames

D. Cellular Signals

MCQ 130: The mobile station moves from one cell to another during a

A. Conversation

B. Optimization

C. Connection

D. Stations

MCQ 131: Satellite network is a combination of

A. Nodes

B. Wires

C. Slots

D. Codes

MCQ 132: Middle Earth Orbit (MEO) are located at altitude in between

A. 1000 to 1500 Kln

B. 2000 to 4000 Kln

C. 3000 to 10000 Kln

D. 5000 to 15000 Kln

MCQ 133: In cellular telephony each slot holds

A. 320 Bits

B. 322 Bits

C. 324 Bits

D. 330 Bits

MCQ 134: The Iridium System was halted in 1999 due to

A. System Problems

B. HR Problems

C. Technical Problems

D. Financial Problems

MCQ 135: AMPS is an analog cellular phone system using

A. CDMA

B. MSC

C. FDMA

D. TDMA

MCQ 136: AMPS uses FDMA to divide each 25-MHz into

A. 3D-KHz

B. 2D-KHz

C. 4D-KHz

D. 5D-KHz

MCQ 137: Low Earth Orbit (LEO) satellites can be divided into

A. 6 Categories

B. 4 Categories

C. 3 Categories

D. 2 Categories

MCQ 138: Under new ownership, the iridium system re-started in

A. 2000

B. 2001

C. 2002

D. 2003

MCQ 139: LEO stands for

A. Line Earth Orbit

B. Local Earth Orbit

C. Local Element Orbit

D. Low Earth Orbit

MCQ 140: In Global Service for Mobile (GSM), each band is 25 MHz in width, shifted toward

A. 400 MHz

B. 650 MHz

C. 750 MHz

D. 900 MHz

MCQ 141: The numbers in the cells defines the

A. pattern

B. area

C. location

D. None

MCQ 142: The third-generation Cellular Telephony, concept started in

A. 1990

B. 1991

C. 1992

D. 1993

MCQ 143: In Teledesic System, the orbits are at an altitude of

A. 1350 kln

B. 1450 kln

C. 1550 kln

D. 1650 kln

MCQ 144: Low Earth Orbit (LEO) is below an altitude of

A. 4000 Km

B. 3500 Km

C. 2000 Km

D. 1500 Km

MCQ 145: In cellular telephony, the radius of a cell is typically

A. 1 to 12 mi

B. 2 to 14 mi

C. 2 to 16 mi

D. 2 to 20 mi

MCQ 146: A multiframe of Global Service for Mobile (GSM) has a duration of

A. 120 ms

B. 125 ms

C. 130 ms

D. 135 ms

MCQ 147: In reverse transmission of Interim Standard 95 (IS-95), symbols are divided into six-symbol

A. Frames

B. Chunks

C. Representation

D. Packets

MCQ 148: Global Positioning Service (GPS) uses 24 satellites in

A. 9 Orbits

B. 8 Orbits

C. 7 Orbits

D. 6 Orbits

MCQ 149: Satellite networks are like

A. Slot Network

B. Station Network

C. Static Network

D. Cellular Network

MCQ 150: The footprint of Low Earth Orbit (LEO) normally has a diameter of

A. 8000 Km

B. 8500 Km

C. 9000 Km

D. 10000 Km

MCQ 151: The third generation of Cellular Telephony can provide both, the Voice Communication and

A. Frames

B. Videos

C. Digital Packets

D. Digital Data

MCQ 152: Global Positioning Service (GPS) is based on a principle called

A. Arbitration

B. Trilateration

C. Orbiteration

D. Globalization

MCQ 153: The number of satellites were reduced in

A. Iridium System

B. Meridian System

C. Brideway System

D. Gateway System

MCQ 154: Line-of-sight propagation is done by

A. MEO Satellites

B. GEO Satellites

C. LEO Satellites

D. None

MCQ 155: The trilateration of Global Positioning Service (GPS) means using

A. 7 Distance

B. 5 Distance

C. 3 Distance

D. 2 Distance

MCQ 156: In Global star system, ground stations can create more powerful

A. Network

B. Signal

C. Beam

D. Communication

MCQ 157: modern Bluetooth is the implementation of protocol, defined by

A. Frames

B. Stations

C. Signals

D. Cellular

MCQ 158: GPS stands for

A. Global Positioning System

B. Global Positioning station

C. Global Posting Signal

D. Global Point Solution

MCQ 159: PCS stands for

A. Personal communications System

B. Public communications system

C. Personal communications Solution

D. Public communications Station

MCQ 160: In cellular telephony, every base station continuously broadcasts signals using its pilot

A. Plan

B. System

C. Frame

D. Channel

MCQ 161: A station which can detect the pilot signal from its cell and neighboring cell is called

A. DataBits Station

B. Signal Station

C. Mobile Station

D. GPS station

MCQ 162: The IS-95 cellular telephone system uses GPS to create time synchronization between the

A. Space Station

B. Base Station

C. Land Station

D. Air Station

Chapter 33

WWW and HTTP Multiple Choice Questions

MCQ 1: An applet is a program written in Java on the

A. Web

B. Server

C. Domain

D. Client

MCQ 2: To let the client know about the type of document sent, a CGI program creates

A. Body

B. Header

C. Borders

D. Footer

MCQ 3: Hyper Text Transfer Protocol (HTTP) support

A. Proxy Domain

B. Proxy Documents

C. Proxy Server

D. Proxy IP

MCQ 4: To create the Web Pages we use a term, called

A. TCP/IP

B. WWW

C. HTML

D. FTP

MCQ 5: A browser can retrieve and run an HTML file that has embedded the address of

A. Applets

B. Language

C. HTML

D. HTTP

MCQ 6: Nontextual information such as digitized photos or graphic images is not a physical part of an

A. WebPage

B. WebData

C. HTML

D. Web-document

MCQ 7: The documents in the WWW can be grouped into three broad categories

A. Static, double, active

B. Stateless, dynamic, archive

C. Static, domain, architecture

D. Static, dynamic, active

MCQ 8: To use proxy server, the client must be configured to access the proxy instead of the

A. Proxy Server

B. Target Server

C. Domain Server

D. Original Server

MCQ 9: The protocol is the client/server program used to retrieve the

A. IP

B. Header

C. Document

D. Cache

MCQ 10: The language used for writing active documents is

A. C++

B. Perl

C. java

D. Php

MCQ 11: The documents that are created and stored in a server as a Fixed Content are called

A. Static Documents

B. Stateless Document

C. Active Documents

D. Dynamic Documents

MCQ 12: In Hypertext transaction, the formats of the request and response messages are

A. Different

B. Similar

C. Constant

D. Active

MCQ 13: In Hypertext Transaction, the term CONNECT is used for

A. Connection Generation

B. Reserved Connection

C. Connection termination

D. Active Connection

MCQ 14: In WWW and HTTP. a technology that creates and handles dynamic documents is called

A. Common Gateway Interface

B. Common Gateway Integrate

C. Common Gateway IP

D. Common Gateway Internet

MCQ 15: A program or a script to be run at the client site are called

A. Web Documents

B. HyperLink Documents

C. Static Documents

D. Active Documents

MCQ 16: In World Wide Web (WWW), an electronic store (e-commerce) can use a cookie for its

A. Client Shopper

B. Server Usage

C. Server Data

D. Client Data

MCQ 17: The HTTP uses a TCP connection to

A. Establishment of servers' connection

B. Transfer whole database

C. Client server connections

D. Transfer files

MCQ 18: In Hyper Text Transfer Protocol (HTTP), a client can directly connect to a server using

A. Web-based connection

B. Domain

C. TELNET

D. Linear Connection

MCQ 19: HTML stands for

A. Hypertext Markup Locator

B. Hypertext Markup Language

C. Hypertext Mixed Language

D. Hypertext Markup Lines

MCQ 20: A Web page is made up of two parts

A. Header and Footer

B. Text and Number

C. Document and Body

D. Head and Body

MCQ 21: The Uniform Resource Locator (URL), is a standard for specifying any kind of information on the

A. Server-End

B. Client-End

C. WebPage

D. Internet

MCQ 22: The World Wide Web (WWW), was originally designed as a

A. Stateless Document

B. Stateless Program

C. Stateless Entity

D. Stateless IP

MCQ 23: The Webpages are stored at the

A. Server

B. Client

C. Domain

D. Mail Server

MCQ 24: The Uniform Resource Locator (URL), defines four things: protocol, host computer, port and

A. Path

B. Page

C. Program

D. Access

MCQ 25: The Hypertext Transfer Protocol (HTTP) uses the services of TCP on

A. well-known port 80

B. well-known port 81

C. well-known port 82

D. well-known port 83

MCQ 26: In Uniform Resource Locator (URL), path is the pathname of the file where the information is

A. Stored

B. Located

C. to be transferred

D. Transferred

MCQ 27: The Hypertexts are documents linked to one another through the concept of

A. Variables

B. Pointers

C. Arrays

D. Stacks

MCQ 28: An HTTP message is similar in form to an

A. C+

B. SMTP

C. TCP

D. Perl

MCQ 29: The Hypertext Markup Language (HTML) is a language for creating

A. Networks

B. Webpages

C. Protocols

D. All of above

MCQ 30: URL stands for

A. Uniform Resource Loader

B. Uniform Resource Line

C. Uniform Resource Locator

D. Uniform Reading Loader

MCQ 31: The proxy server reduces the load on the

A. Proxy Server

B. Node Server

C. Domain Server

D. Original Server

MCQ 32: A proxy server keeps copies of responses to

A. Current requests

B. Recent requests

C. Pending requests

D. Received Requests

MCQ 33: When a client sends a request to a server, the browser looks for it in the

A. Addresses

B. Cookie Directory

C. Active Directory

D. Host Directory

MCQ 34: In Architecture, to improve efficiency, servers normally store requested files in a cache in

A. Server

B. Domain

C. WebServer

D. Memory

MCQ 35: Dynamic documents are sometimes referred to as

A. Client-site dynamic documents

B. Active dynamic documents

C. Server-site dynamic documents

D. None of above

Answers Keys

Chapter 1: Analog Transmission MCQs

1. A 2. A 3. B 4. A 5. A
6. A 7. B 8. C 9. A 10. C
11. C 12. B 13. C 14. B 15. A
16. A 17. C 18. A 19. D 20. D
21. D 22. C

Chapter 2: Bandwidth Utilization: Multiplexing and Spreading MCQs

1. D   2. B   3. D   4. A   5. A
6. B   7. D   8. B   9. D   10. A
11. C   12. A   13. D   14. B   15. B
16. D   17. A   18. C   19. A   20. D
21. B   22. B   23. C   24. A   25. B
26. C   27. C   28. B   29. B   30. B
31. C   32. A   33. B   34. C   35. B
36. A   37. A   38. B   39. B   40. C
41. B

Chapter 3: Computer Networking MCQs

1. A 2. A 3. B 4. A 5. A
6. D 7. A 8. B 9. B 10. D
11. A 12. A 13. A 14. A 15. D
16. C 17. A 18. C 19. C 20. C
21. D 22. A 23. A 24. B 25. A
26. B 27. B 28. D 29. D 30. A
31. B 32. C 33. C 34. A

Chapter 4: Congestion Control and Quality of Service

1. C 2. B 3. C 4. B 5. A
6. C 7. B 8. D 9. A 10. C
11. A 12. B 13. A 14. B 15. A
16. D 17. C 18. D 19. C 20. B
21. A 22. C 23. A 24. B 25. C
26. D 27. B 28. B 29. A 30. A
31. A 32. D 33. A 34. D 35. A
36. B 37. D

Chapter 5: Connecting LANs, Backbone Networks and Virtual LANs MCQs

1. B 2. A 3. D 4. A 5. D
6. B 7. B 8. C 9. D 10. D
11. C 12. A 13. B 14. B 15. B
16. A 17. B 18. A 19. D 20. D
21. B 22. D 23. C 24. A 25. B
26. C 27. B 28. D 29. C 30. A
31. A 32. B 33. C 34. A 35. A
36. D 37. C

Chapter 6: Cryptography MCQs

1. B 2. B 3. C 4. C 5. A
6. D 7. A 8. D 9. D 10. A
11. A 12. C 13. C 14. B 15. A
16. A 17. C 18. A 19. B 20. B
21. B 22. A 23. B 24. D 25. D
26. A 27. D 28. C 29. C 30. B
31. B 32. D 33. C 34. C 35. A
36. B 37. B 38. D 39. A 40. A
41. C

Chapter 7: Data and Signals MCQs

1. A   2. A   3. A   4. A   5. B
6. A   7. A   8. B   9. B   10. A
11. C   12. D   13. B   14. D   15. B
16. A   17. D   18. B   19. B   20. D
21. A   22. D   23. B   24. D   25. A
26. D   27. B   28. B   29. A   30. D
31. C   32. B   33. C   34. B   35. C
36. B   37. C   38. B   39. B   40. D
41. B   42. A   43. C   44. B   45. A
46. A   47. D   48. C   49. A   50. D
51. A   52. A   53. B   54. A   55. D

Chapter 8: Data Communications MCQs

1. C 2. D 3. C 4. A 5. A
6. A 7. C 8. C 9. A 10. A
11. A 12. D 13. A 14. B 15. A
16. D 17. C 18. A 19. A 20. B
21. A 22. B 23. C 24. A 25. A
26. D

Chapter 9: Data Link Control MCQs

1. C 2. A 3. C 4. A 5. B
6. D 7. B 8. B 9. B 10. C
11. B 12. A 13. B 14. C 15. A
16. D 17. A 18. A 19. D 20. D
21. C 22. B 23. B 24. B 25. B
26. A 27. A 28. A 29. C 30. D
31. C 32. D 33. A 34. C 35. C
36. A 37. B 38. A 39. C 40. B
41. C 42. D 43. A 44. B 45. A
46. D 47. B 48. B 49. D 50. A
51. C 52. C 53. C 54. D 55. A
56. D 57. D 58. A 59. C 60. B
61. D 62. A 63. D 64. C 65. D

Chapter 10: Data Transmission: Telephone and Cable Networks MCQs

1. A 2. B 3. A 4. D 5. B
6. A 7. A 8. A 9. C 10. B
11. A 12. B 13. A 14. C 15. B
16. B 17. D 18. D 19. A 20. A
21. B 22. C 23. B 24. A 25. C
26. A 27. D 28. C 29. C 30. D
31. B 32. A 33. C 34. A 35. A
36. C 37. D 38. C 39. B 40. C
41. A 42. B 43. A 44. B 45. C
46. D 47. C 48. D 49. D 50. A
51. A

Chapter 11: Digital Transmission MCQs

1. D 2. B 3. C 4. B 5. C
6. C 7. C 8. A 9. A 10. B
11. B 12. A 13. A 14. D 15. A
16. A 17. C 18. D 19. A 20. C
21. A 22. B 23. B 24. B 25. D
26. D 27. A 28. B 29. B 30. A
31. B 32. B 33. C 34. C 35. A
36. C 37. B 38. D 39. B 40. C
41. A 42. C 43. A 44. A 45. A
46. C 47. C 48. D 49. C 50. C
51. A 52. A 53. A 54. C 55. A
56. B 57. D 58. B 59. B 60. D
61. A 62. B 63. B 64. A 65. B

Chapter 12: Domain Name System MCQs

1. A 2. A 3. B 4. A 5. B
6. C 7. B 8. D 9. D 10. C
11. D 12. D 13. B 14. C 15. A
16. A 17. B 18. B 19. A 20. D
21. A 22. A 23. B 24. D 25. D
26. C 27. C 28. D 29. B 30. B
31. B 32. D 33. C 34. A 35. C
36. D 37. C 38. A 39. A 40. C
41. D 42. B 43. C 44. C 45. A
46. B 47. D 48. B 49. C 50. B
51. D 52. C 53. B 54. B 55. B
56. B

Chapter 13: Error Detection and Correction MCQs

1. A 2. B 3. D 4. D 5. A
6. D 7. B 8. B 9. A 10. D
11. A 12. C 13. A 14. D 15. B
16. B 17. C 18. C 19. C 20. C
21. D 22. C 23. B 24. D 25. B
26. B 27. B 28. C 29. B 30. C
31. A 32. D 33. A 34. C 35. D
36. A 37. A 38. C 39. B 40. A
41. C 42. B 43. B

Chapter 14: Multimedia MCQs

1. A 2. B 3. A 4. B 5. B
6. D 7. D 8. B 9. B 10. C
11. B 12. B 13. A 14. C 15. B
16. C 17. C 18. C 19. B 20. D
21. B 22. A 23. D 24. B 25. A
26. A 27. D 28. C 29. D 30. A
31. D 32. A 33. A 34. D 35. A
36. C 37. A 38. C 39. B 40. B
41. B 42. C 43. D 44. C 45. C
46. A 47. C 48. C 49. B 50. D
51. A 52. A 53. C 54. D 55. D

Chapter 15: Multiple Access MCQs

1. B   2. D   3. A   4. A   5. C
6. C   7. A   8. B   9. B   10. B
11. C   12. C   13. D   14. D   15. B
16. C   17. A   18. C   19. B   20. A
21. A   22. D   23. A   24. B   25. A
26. C   27. D   28. C   29. D   30. A
31. A   32. A   33. C   34. B   35. C
36. C   37. A   38. B   39. B   40. B
41. A   42. C   43. C   44. C   45. D
46. B   47. B   48. C   49. D   50. B
51. D   52. A   53. C   54. B   55. D
56. A   57. D   58. C   59. C   60. B
61. B   62. B   63. C   64. B   65. B
66. D   67. C   68. C   69. B   70. A
71. D   72. B   73. B

Chapter 16: Network Layer: Address Mapping, Error Reporting and Multicasting MCQs

1. D
2. A
3. D
4. A
5. B
6. A
7. B
8. C
9. B
10. A
11. D
12. D
13. A
14. C
15. A
16. C
17. A
18. C
19. C
20. B
21. D
22. C
23. A
24. A
25. B
26. B
27. A
28. C
29. A
30. B
31. B
32. D
33. C
34. C
35. C
36. D
37. D
38. A
39. D
40. A
41. D
42. B
43. D
44. D
45. C
46. D
47. C
48. D
49. D
50. A
51. C
52. A
53. C
54. A
55. C
56. C
57. D
58. D
59. B
60. B
61. B
62. A
63. C
64. A
65. C
66. B
67. A
68. B
69. B
70. B
71. B
72. A
73. C
74. B
75. D
76. D
77. D
78. A
79. B
80. C
81. B
82. A
83. C
84. A
85. A
86. C
87. A
88. D
89. B
90. B
91. B

Chapter 17: Network Layer: Delivery, Forwarding, and Routing MCQs

1. D 2. B 3. D 4. B 5. D
6. D 7. C 8. B 9. A 10. D
11. B 12. D 13. B 14. A 15. A
16. D 17. A 18. D 19. D 20. C
21. C 22. C 23. D 24. A 25. B
26. B 27. D 28. B 29. A 30. A
31. A 32. A 33. A 34. C 35. A
36. A 37. A 38. C 39. D 40. C
41. B 42. A 43. B 44. C 45. C
46. D 47. D 48. C 49. D 50. C
51. A 52. C 53. D 54. C 55. B
56. C 57. A 58. B 59. B 60. D
61. C 62. C 63. A 64. C 65. D
66. D 67. B 68. A 69. B 70. C
71. D 72. A 73. B 74. C 75. D
76. C 77. D 78. C 79. C 80. A
81. C 82. B 83. A 84. C 85. A
86. B 87. A 88. A 89. D 90. D
91. A 92. B 93. A 94. C 95. C
96. C 97. A 98. B 99. A 100. B
101. C 102. C 103. D 104. C 105. B
106. A 107. B 108. D 109. D 110. C

Chapter 18: Network Layer: Internet Protocol MCQs

1. A
2. D
3. C
4. B
5. D
6. A
7. C
8. A
9. B
10. A
11. C
12. B
13. A
14. B
15. C
16. A
17. D
18. B
19. B
20. C
21. D
22. A
23. B
24. A
25. C
26. C
27. C
28. C
29. C
30. B
31. C
32. C
33. A
34. C
35. B
36. B
37. D
38. A
39. A
40. B
41. B
42. A
43. B
44. D
45. B
46. B
47. D
48. C
49. B
50. A
51. C
52. C
53. C
54. C
55. A
56. D
57. B
58. C
59. D
60. C
61. B
62. D
63. D
64. A
65. D
66. B
67. C
68. C
69. B
70. C
71. D
72. A
73. C
74. A
75. A
76. C
77. B
78. D
79. C
80. B
81. C
82. B
83. B
84. D
85. A
86. A
87. B
88. A
89. C
90. D
91. B
92. C
93. A
94. D
95. B
96. D
97. B
98. A

Chapter 19: Network Layer: Logical Addressing MCQs

1. B 2. C 3. B 4. A 5. A
6. C 7. D 8. C 9. C 10. B
11. D 12. A 13. C 14. A 15. B
16. A 17. B 18. D 19. A 20. C
21. B 22. B 23. C 24. D 25. D
26. A 27. C 28. C 29. B 30. A
31. B 32. B 33. C 34. A 35. B
36. C 37. c 38. B 39. B 40. D
41. C 42. B 43. C 44. A 45. C
46. A 47. C 48. D 49. B 50. C
51. D 52. A 53. C 54. A 55. C
56. B 57. D 58. D 59. C 60. D
61. A 62. D 63. D 64. B 65. A
66. A 67. A 68. A 69. D 70. D
71. B 72. B 73. D 74. B 75. C

Chapter 20: Network Management: SNMP MCQs

1. C 2. A 3. A 4. D 5. D
6. B 7. B 8. A 9. C 10. A
11. D 12. A 13. C 14. A 15. B
16. C 17. C 18. A 19. B 20. B
21. B 22. D 23. C 24. A 25. C
26. A 27. B 28. C 29. D 30. B
31. A 32. C 33. C 34. D 35. A
36. B 37. A 38. C 39. D 40. A

Chapter 21: Network Models MCQs

1. D   2. B   3. A   4. C   5. A
6. A   7. B   8. D   9. D   10. A
11. A   12. B   13. C   14. A   15. B
16. D   17. B   18. C   19. C   20. A
21. D   22. B   23. A   24. A   25. A
26. B   27. C   28. B   29. B   30. C
31. B   32. B   33. C   34. B   35. B
36. A   37. D   38. B   39. D   40. B
41. D   42. A   43. D   44. C   45. B
46. C   47. C   48. C   49. C   50. A
51. D   52. A   53. B

Chapter 22: Network Security MCQs

1. C
2. A
3. B
4. A
5. C
6. B
7. C
8. B
9. A
10. B
11. A
12. A
13. D
14. A
15. C
16. B
17. C
18. A
19. A
20. B
21. C

Chapter 23: Process to Process Delivery: UDP, TCP and SCTP MCQs

1. A 2. C 3. B 4. C 5. A
6. D 7. C 8. C 9. B 10. C
11. C 12. D 13. B 14. B 15. B
16. A 17. C 18. D 19. D 20. A
21. C 22. B 23. A 24. C 25. D
26. B 27. A 28. C 29. D 30. D
31. B 32. B 33. B 34. C 35. A
36. B 37. D 38. A 39. A 40. C
41. B 42. C 43. B 44. D 45. A
46. A 47. B 48. A 49. B 50. A
51. B 52. C 53. C 54. A 55. A
56. B 57. B 58. A 59. C 60. D
61. B 62. A 63. B 64. A 65. B
66. C 67. B 68. C 69. C 70. C
71. A 72. D 73. C 74. A 75. C
76. A 77. A 78. D 79. B 80. D
81. A 82. A 83. B 84. D 85. D
86. D 87. C 88. A 89. D 90. D
91. B 92. C 93. C 94. C 95. A
96. D 97. D 98. C 99. B 100. A
101. D 102. B 103. B 104. A 105. D
106. D 107. B 108. B 109. B 110. C
111. B 112. C 113. A 114. C 115. A
116. C 117. B 118. C 119. B 120. C

Chapter 24: Remote Logging, Electronic Mail and File Transfer MCQs

1. A 2. A 3. C 4. C 5. B
6. D 7. B 8. B 9. A 10. A
11. D 12. D 13. D 14. D 15. D
16. B 17. D 18. D 19. B 20. B
21. A 22. B 23. A 24. A 25. D
26. B 27. A 28. C 29. D 30. C

Chapter 25: Security in the Internet: IPSec, SSUTLS, PGP, VPN and Firewalls MCQs

1. B 2. D 3. B 4. B 5. D
6. A

Chapter 26: SONET MCQs

1. C 2. C 3. A 4. B 5. B
6. A 7. A 8. B 9. C 10. C
11. D 12. A 13. B 14. D 15. C
16. A 17. B 18. B 19. A 20. B
21. D 22. D 23. D 24. C 25. D
26. D 27. B 28. B 29. A 30. B
31. D 32. A 33. B 34. A 35. D
36. D 37. A 38. B 39. B 40. B
41. A 42. C 43. A 44. B 45. B
46. A 47. C 48. C 49. C 50. D
51. C 52. C 53. B 54. B 55. B
56. B 57. D 58. C 59. D

Chapter 27: Switching MCQs

1. A 2. A 3. D 4. C 5. C
6. B 7. A 8. B 9. C 10. B
11. A 12. A 13. B 14. A 15. D
16. C 17. D 18. A 19. B 20. C
21. B 22. C 23. D 24. C 25. A
26. B 27. A 28. C 29. C

Chapter 28: Transmission Media MCQs

1. A 2. D 3. C 4. D 5. D
6. C 7. B 8. B 9. D 10. A
11. A 12. A 13. A 14. B 15. D
16. D 17. B 18. C 19. A 20. A
21. C 22. B 23. A 24. B 25. C
26. D 27. B 28. C 29. C 30. C
31. D 32. C 33. D 34. B 35. D
36. A 37. A 38. B 39. B 40. A
41. B 42. A 43. C 44. A 45. B
46. B 47. D

Chapter 29: Virtual Circuit Networks: Frame Relay and ATM MCQs

1. C 2. B 3. D 4. D 5. B
6. A 7. A 8. D 9. A 10. B
11. A 12. C 13. C 14. D 15. A
16. A 17. D 18. A 19. A 20. B
21. B 22. C 23. C 24. D 25. D
26. A 27. C 28. D 29. D 30. C
31. A 32. A 33. C 34. A 35. B
36. B 37. D 38. C 39. C 40. D
41. D 42. B 43. C 44. C 45. B
46. A 47. A 48. B 49. A 50. A
51. D 52. A 53. B 54. D 55. A
56. D 57. A 58. C 59. D 60. C
61. B 62. A 63. A 64. C 65. D
66. C 67. C 68. D 69. C 70. B
71. C 72. A 73. D 74. B 75. D
76. D 77. A 78. C 79. A 80. B
81. C 82. D 83. C 84. B 85. C
86. B 87. C 88. D 89. C 90. A
91. B 92. B 93. D 94. B 95. D
96. B 97. A 98. B 99. C 100. B
101. B 102. D 103. B 104. C 105. D
106. B 107. C 108. C 109. B 110. D
111. B 112. C 113. C 114. D

Chapter 30: Wired LANs: Ethernet MCQs

1. B   2. A   3. C   4. B   5. D
6. B   7. D   8. D   9. D   10. D
11. B   12. B   13. C   14. D   15. A
16. A   17. C   18. A   19. C   20. B
21. B   22. D   23. B   24. B   25. C
26. D   27. A   28. B   29. A   30. D
31. C   32. B   33. A   34. D   35. B
36. B   37. C   38. D   39. D   40. B
41. B   42. D   43. D   44. D   45. B
46. C   47. B   48. B   49. D   50. B
51. C   52. A   53. A   54. A   55. B
56. A   57. D   58. A   59. B   60. A
61. B   62. A   63. A   64. A   65. C
66. A   67. B   68. C   69. C   70. D
71. A

Chapter 31: Wireless LANs MCQs

1. A	2. B	3. A	4. B	5. A
6. 2	7. B	8. C	9. B	10. A
11. D	12. B	13. A	14. A	15. B
16. A	17. B	18. B	19. C	20. A
21. B	22. A	23. A	24. A	25. A
26. C	27. A	28. C	29. A	30. A
31. C	32. B	33. C	34. C	35. A
36. C	37. B	38. D	39. C	40. A
41. A	42. B	43. D	44. B	45. A
46. D	47. B	48. D	49. C	50. A
51. C	52. B	53. A	54. C	55. B
56. A	57. C	58. D	59. D	60. C
61. C	62. D	63. A	64. C	65. B
66. B	67. D	68. A	69. B	70. B
71. C	72. A	73. D	74. B	75. B
76. B	77. D	78. B	79. C	80. B
81. D	82. C	83. C	84. B	85. D
86. A	87. C	88. D	89. C	90. A
91. A	92. B	93. A	94. A	95. B
96. C	97. C	98. B	99. B	100. B

Chapter 32: Wireless WANs: Cellular Telephone and Satellite Networks MCQs

1. D 2. C 3. D 4. C 5. D
6. D 7. C 8. A 9. C 10. A
11. A 12. A 13. D 14. A 15. A
16. C 17. C 18. B 19. B 20. B
21. C 22. A 23. D 24. A 25. C
26. B 27. D 28. B 29. B 30. D
31. B 32. B 33. B 34. D 35. C
36. A 37. A 38. D 39. B 40. A
41. B 42. B 43. C 44. B 45. A
46. D 47. D 48. C 49. C 50. D
51. B 52. B 53. C 54. C 55. C
56. A 57. B 58. B 59. A 60. D
61. C 62. A 63. C 64. B 65. A
66. A 67. B 68. B 69. A 70. D
71. B 72. D 73. C 74. C 75. B
76. B 77. C 78. B 79. A 80. A
81. A 82. C 83. B 84. A 85. B
86. C 87. B 88. B 89. B 90. B
91. C 92. C 93. C 94. C 95. B
96. B 97. C 98. C 99. D 100. C
101. B 102. B 103. B 104. C 105. C
106. D 107. B 108. A 109. D 110. B
111. C 112. A 113. D 114. C 115. B
116. A 117. B 118. D 119. C 120. D
121. B 122. D 123. C 124. D 125. C
126. D 127. C 128. D 129. B 130. A
131. A 132. D 133. C 134. D 135. C
136. A 137. C 138. B 139. D 140. D
141. A 142. C 143. A 144. C 145. A
146. A 147. B 148. D 149. D 150. A
151. D 152. B 153. A 154. B 155. C
156. B 157. B 158. A 159. A 160. D

161. C 162. B

Chapter 33: WWW and HTTP MCQs

1. B 2. B 3. C 4. C 5. A
6. C 7. D 8. B 9. C 10. C
11. A 12. B 13. B 14. A 15. D
16. A 17. D 18. C 19. B 20. D
21. D 22. C 23. A 24. A 25. A
26. B 27. B 28. B 29. B 30. C
31. D 32. B 33. B 34. D 35. C